

# HITACHI

VIDEO CASSETTE RECORDER  
VT-DX815A

Owner's manual



Using these quality features:

- **D-VHS recording/playback**
- **Multi-channel TV sound (MTS)**
- **8-program/1-year preset recording**
- **Auto clock set feature allows you to automatically set the present time in the DSS® box clock (only when the VCR is connected to a DSS® box with digital interface function)**
  - \* DSS® is a registered trademark of DIRECTV, Inc., a unit of GM Hughes Electronics
- **Auto head cleaning system minimizes the need for accessory cleaners and professional head cleaning**
- **Auto tracking system automatically adjusts the tracking so the picture is optimized**
- **Frequency synthesized tuner provides easy, preset tuning of up to 68 broadcast TV channels and 125 cable channels**
- **VHS Hi-Fidelity sound in playback**
- **Illuminated remote control for use with your VCR and TV**
- **On-screen programming guide**

## TABLE OF CONTENTS

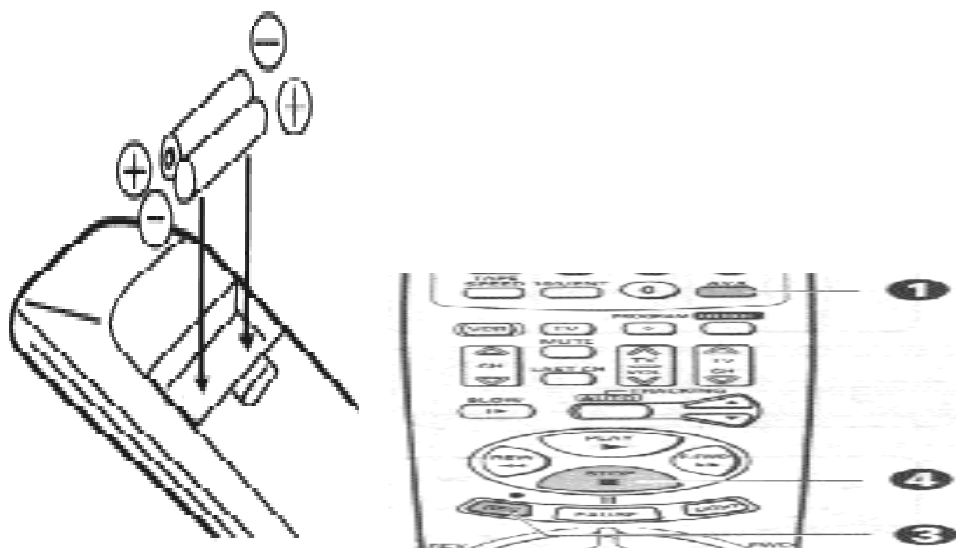
FOR YOUR SAFETY .....	6
IMPORTANT SAFEGUARDS .....	7
CUSTOMER CONTROLS.....	11
VCR Customer Controls .....	11
VCR Customer Controls .....	12
Remote Control Customer Controls.....	12
REMOTE OPERATION.....	14
Install batteries in the remote control.....	14
Operating in the remote control .....	14
CASSETTE TAPES .....	15
Types.....	15
Safety tabs prevent erasure.....	15
Insertion.....	16
Removal .....	16
DSS® BOX WITH DIGITAL INTERFACE HOOKUP–AV HOOKUP [A] .....	17
WITH THIS HOOKUP.....	17
DSS® BOX WITH DIGITAL INTERFACE HOOKUP – S CABLE HOOKUP [B]	
.....	18
WITH THIS HOOKUP.....	18
DSS® BOX WITH DIGITAL INTERFACE HOOKUP – RF HOOKUP [C] .....	19
WITH THIS HOOKUP.....	19
DSS® BOX WITHOUT DIGITAL INTERFACE HOOKUP–AV HOOKUP [D] .	21
WITH THIS HOOKUP.....	21
DSS® BOX WITHOUT DIGITAL INTERFACE HOOKUP – RF HOOKUP [E]	22
WITH THIS HOOKUP.....	22
BASIC ANTENNA HOOKUP [F].....	23
WITH THIS HOOKUP.....	23
ADVANCED ANTENNA HOOKUP -AV HOOKUP [G].....	24
WITH THIS HOOKUP.....	24
BASIC CABLE HOOKUP [H].....	25
WITH THIS HOOKUP.....	25
ADVANCED CABLE HOOKUP -AV HOOKUP [I].....	26
WITH THIS HOOKUP.....	26
BASIC CABLE HOOKUP -WITH CABLE BOX [J].....	27
WITH THIS HOOKUP.....	27
ADVANCED CABLE HOOKUP -WITH CABLE BOX [K] .....	28
WITH THIS HOOKUP.....	28
ADVANCED CABLE HOOKUP -WITH CABLE BOX AND SPLITTER [L]	29
WITH THIS HOOKUP.....	29
SETTING THE CLOCK.....	30
Tips.....	30

## FOR YOUR SAFETY

To set the clock manually .....	30
PRE-TUNING THE VCR TUNER.....	34
Presetting the received channels without using a cable box (Hookups [A], [B], [C], [D], [E], [F], [G], [H] or [I]) .....	34
When automatic presetting of channels are finished .....	36
To add or erase channels .....	36
Auto blue setting.....	38
PLAYBACK .....	41
To playback a recorded tape .....	41
Rewinding the tape .....	42
Rewinding the tape .....	42
To remove noise from the picture .....	42
SPECIAL PLAYBACK EFFECTS.....	44
Variable speed playback.....	44
Choosing a mode for audio playback .....	45
SHUTTLE CONTROL .....	47
Using the shuttle ring on the remote control .....	47
USING THE "INDEX" FEATURE .....	48
To find specific sections on a tape using the "INDEX" feature.....	48
VIEWING THE ON-SCREEN DISPLAY .....	50
Switching between the clock, time counter and time of remaining tape.....	50
INDEX WITH THE TIME COUNTER.....	51
To find specific sections on a tape.....	51
VHS RECORDING STEP.....	52
Before you record .....	52
Basic recording steps .....	52
To watch a DSS® program while recording a program other than DSS® .....	54
D-VHS RECORDING SETUP .....	55
Setup Procedure (Hookups [A], [B] or [C]).....	55
D-VHS RECORDING STEP .....	57
Basic recording steps .....	57
RECORDING A PROGRAM - RECORDING TIPS .....	59
To watch one program while recording another.....	59
To change the channel being recorded .....	59
To record a Second Audio Program (SAP).....	60
Stereo vs. mono sound.....	61
INSTANT RECORDING TIMER.....	63
Using the Instant Recording Timer (IRT) .....	63
DELAYED RECORDING.....	64
Setting the VCR to record later .....	64
Before you begin .....	64
PROGRAM REVIEW .....	70
Reviewing what you have programmed.....	70
PROGRAMMING THE VCR REMOTE TO CONTROL YOUR TV .....	72
Using the VCR remote to control your TV.....	72

## FOR YOUR SAFETY

USING THE VCR REMOTE TO OPERATE HITACHI OR HUGHES DSS® BOX .....	74
Remote Control Customer Controls.....	74
INTEGRATING YOUR STEREO SYSTEM WITH YOUR VCR .....	75
Hookup .....	75
To record from stereo .....	75
COPYING TAPES FROM A CAMCORDER.....	77
Hookup .....	77
To copy from a camcorder.....	77
COPYING FROM ONE VCR TO ANOTHER VCR (DUBBING) .....	79
Hookup .....	79
To copy from one VCR to another VCR.....	79
COPYING FROM ONE VT-DX815A TO ANOTHER VT-DX815A (D-VHS DUBBING).....	81
Hookup .....	81
To copy from one VT-DX815A to another VT-DX815A .....	81
PROBLEM GUIDE .....	82
Problem guide .....	82
MAINTENANCE .....	83
Maintenance .....	83
TECHNICAL SPECIFICATIONS .....	84
Technical specifications.....	84



**HITACHI HOME ELECTRONICS  
CORPORATION**

**HITACHI SALES**

**FOR YOUR SAFETY**

**(AMERICA), INC.**

3890 Steve Reynolds Blvd,  
Honolulu,  
Norcross, GA 30093  
Tel. 770-279-5600

**OF HAWAII, INC.**

3219 Koapaka Street,  
  
HI 96819  
Tel. 808-836-3621

**HITACHI (HSC) CANADA INC.**

6740 Campobello Road  
Mississauga, Ontario L5N 2L8  
CANADA  
Tel. 905-821-4545

QR17951 © Hitachi, Ltd. 1997  
Printed in Japan

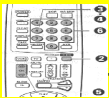
## FOR YOUR SAFETY

## FOR YOUR SAFETY

POWER SUPPLY: AC 120V, 60 Hz ONLY.

The POWER button turns the VCR on and off, leaving the clock/timer unaffected. If the unit is to be left unattended for a long period, it is recommended that the unit be completely switched off and unplugged.

Illustrated below is the label on the back of your unit.



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

**WARNING:** Many television programs and films are copyrighted. In certain circumstances, copyright law may apply to private in-home videotaping of copyrighted materials.

**WARNING:** TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**CAUTION:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF POWER PLUG TO WIDE SLOT OF AC OUTLET AND FULLY INSERT.

**Caution to the user:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**"Note to CATV system installer:** This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical".

## IMPORTANT SAFEGUARDS

### IMPORTANT SAFEGUARDS

In addition to the careful attention devoted to quality standards in the manufacture of your video product, safety is a major factor in the design of every instrument. But, safety is your responsibility too.

This page lists important information that will help to assure your enjoyment and proper use of a Video Cassette Recorder and accessory equipment. Please read it carefully before operating your video product and keep it in a handy place for future reference.

### INSTALLATION

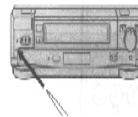
**1 Read and Follow Instructions** – All the safety and operating instructions should be read before the video product is operated. Follow all operating and use instructions.



**2 Retain Instruction** – The safety and operating instructions should be retained for future reference.

**3 Heed Warnings** – Comply with all warnings on the video product and in the operating instructions.

**4 Polarized Plug** – This video product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. To prevent electric shock do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted without blade exposure. If you need an extension, use a polarized cord.



**5 Power Sources** – This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

**6 Overloading** – Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock. Overloaded AC outlets and extension cords are dangerous, and so are frayed power cords, damaged

## IMPORTANT SAFEGUARDS

or cracked wire insulation and broken plugs. They may result in a shock or fire hazard. Periodically examine the cord and have it replaced by your service technician if appearance indicates damage or deteriorated insulation.



**7 Power-Cord Protection** – Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

**8 Ventilation** – Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.



**9 Attachments** – Do not use attachments unless recommended by the video product manufacturer as they may cause hazards.

**Caution:** Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark or CSA certification mark on the accessory itself and should not have been modified so as to defeat the safety features. This will help avoid any potential hazard from electric shock or fire. If in doubt, contact qualified service personnel.

**10 Water and Moisture** – Do not use this video product near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

**11 Accessories** – Do not place this video product on an unstable card, stand, tripod, bracket or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer, or sold with the video product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.



## IMPORTANT SAFEGUARDS

**11A** An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



## IMPORTANT SAFEGUARDS (cont.)

pg. 4

**12 Outdoor Antenna Grounding** – If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See example below.

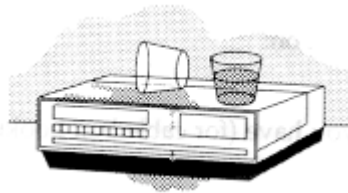
### EXAMPLE OF ANTENNA GROUNDING

**13 Power Lines** – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching or approaching such power lines or circuits as contact with them might be fatal. Installing an outdoor antenna can be hazardous and should be left to a professional antenna installer.

### USE

**14 Cleaning** – Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

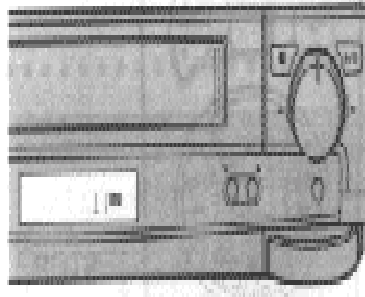
**15 Object and Liquid Entry** – Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.



**16 Lightning** – For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable-

## IMPORTANT SAFEGUARDS

system. This will prevent damage to the video product due to lightning and power-line surges.



### SERVICE

**17 Servicing** – Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**18 Conditions Requiring Service** – Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions.

- a. When the power-supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the video product.
- c. If the video product has been exposed to rain or water.
- d. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
- e. If the video product has been dropped or the cabinet has been damaged.
- f. When the video product exhibits a distinct change in performance - this indicates a need for service.

**19 Replacement Parts** – When replacement parts are required, have the service technician verify that the replacements he uses have the same safety characteristics as the original parts. Use of replacements specified by the video product manufacturer can prevent fire, electric shock or other hazards.


**20 Safety Check** – Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.

## CUSTOMER CONTROLS

### CUSTOMER CONTROLS

#### VCR Customer Controls


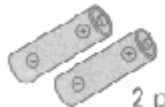
pic

Item No.	Function	Page
1	POWER button	2
2	EJECT button	9
3	Cassette compartment	9
4	STOP button	25
5	Shuttle ring	31
6	PLAY/STILL button	29
7	REC/IRT button	36
8	CHANNEL (channel up/down)	36
	TRACKING buttons	28
9	Infrared receiver	8
10	REC indicator	36
11	D-VHS indicator	27
	pic - "behind the cover"	
12	AUDIO IN (L), (R) jacks	50
13	VIDEO IN jack	50
14	ANT. OUT select button	10
	<b>VCR Display</b>	
	pic	
15	AM/PM indicators	22
16	Time,	22
	Tape counter,	33
	Tape remaining or	33
	VCR mode indicator	27
	PLAY - playback	27
	SRCH - double-speed play and visual	29
	search ["-" appears during reverse	
	direction viewing]	
	SLOW - slow play	—
	REW - rewind	27
	FF - fast forward	—
	STILL - play pause and frame advance	29
17	REM (tape remaining time) indicator	33
18	VCR, operate mode	—
19	Audio indicators	—
20	 - record (flashes during record	36
	pause)	
21	Tape speed SP/EP	35
22	Delayed recording indicator	45
23	Tape-in indicator	9
24	TV channel,	36

## CUSTOMER CONTROLS

Auxiliary (L1/L2)	51
DSS indicator (dSS)	27
Tracking Level Meter	28

### Accessories supplied

1 pic Remote control	2  Cable for connecting this VCR to a TV	3 pic Digital A/V cable	4 pic D-VHS video cassette	5  2 pcs. Batteries for remote control handset (R6)
----------------------------	---	-------------------------------	----------------------------------	---

## CUSTOMER CONTROLS (cont.)

pg. 7

### VCR Customer Controls

pic

Item No.	Function	Page
25	DIGITAL A/V jack	10
26	AUDIO IN (L), (R) jacks	49
27	VIDEO IN jack	—
28	IN FROM ANT. – signal input	10
29	OUT TO TV – signal out to TV	10
30	VIDEO OUT jack	11
31	AUDIO OUT (L), (R) jacks	11

### Remote Control Customer Controls

Remote Control Keys pic

Item No.	Function	Page
1	Transmission window	8
2	POWER button	24
3	GUIDE – to recall OSD menu	24
4	PROGRAM (programming) button	44
5	CLEAR/EXIT – clears time counter	34
6	DISP/INFO – to recall on-screen display	33
7	100/ENT button	36
8	VCR, TV, DSS – device buttons let you set the remote to control one of the three devices	8
9	MUTE button – turns off the audio until you press MUTE again	47

## CUSTOMER CONTROLS

10	VOL button – increase or decrease the audio volume	47
11	REC – record button	36
12	REW button – fast rewind or search	27
13	PLAY button – playback	27
14	DSS GUIDE button	48
15	PAUSE/SELECT button	29
16	Shuttle ring	31
17	LIGHT button – illuminates key function buttons for a few seconds	8
18	DSS MENU button	48
19	STOP button – stops play/record function	27
20	F.F button – fast forward or search	29
21	CH (channel up/down) button	39
22	LAST CH button – switches to the TV channel you watched previously during the current viewing session.	47
23	VCR/TV mode select button	40
24	DSS/TV mode select button	48
25	AVX button – select L1 or L2	49
26	Number buttons	22
27	DSS/VCR button	36

## REMOTE OPERATION

### REMOTE OPERATION

#### Install batteries in the remote control

The remote control requires two "AA" batteries.

pic

**1 Push the ▼ mark and hold it, then slide the cover in the direction of the arrow to remove it.**

**Note:** When replacing the batteries, remove the old batteries and keep the POWER button depressed for 10 seconds before inserting fresh batteries.

pic                      pic **Hold for 10 seconds**   pic

#### **2 Install batteries.**

- Align the positive (+) and negative (-) polarity marks on the batteries with those indicated on the remote control.

pic

#### **3 Slide the cover in the direction of the arrow to close it.**

pic

#### Operating in the remote control

##### Operating the VCR:

**1 Make sure there is no obstacle between the remote control and VCR's infrared receiver.**

pic

**Note:** You cannot operate the VCR if there is an obstacle (for example, coffee table, sofa, etc) between the VCR and remote control.

**2 Point the remote control at the VCR's infrared receiver and press the required button on the remote control.**

**Note:** If the remote does not work even at close range, try replacing the batteries with two fresh "AA" batteries.

##### About the illuminated buttons:

- If a button on the remote control is pressed, one of the VCR, TV and DSS buttons lights so that you know which device you are now operating.

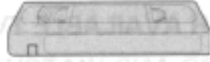
pic

## CASSETTE TAPES

### CASSETTE TAPES

#### Types

Only use video cassettes with the **VHS** or **DVHS** mark in this



**VCR.**

Use only D-VHS video cassettes for D-VHS recording. Do not use any other video cassettes than D-VHS video cassettes for D-VHS recording. You cannot engage D-VHS recording on VHS cassettes.

The table shows the recording time of different cassettes.

- To get the best quality picture, record at standard recording speed (SP).

Types		Recording time		
SP	EP	STD		
VHS	T-120	120 min.	360 min.	—
	T-160	160 min.	480 min.	—
	T-180	180 min.	540 min.	—
	T-210	210 min.	630 min.	—
D-VHS	DF300	—	—	300 min.

**Note:** The recording speed is automatically set to STD during D-VHS recording: You cannot select SP or EP speed.

- This VCR does not record at the LP speed, but it can play cassettes that were recorded at the LP speed.

#### Safety tabs prevent erasure

**To avoid erasing a recording**  
Break off the safety tab using a screwdriver or similar tool.



**To re-record on a cassette which has its safety tab removed**  
Cover the hole with plastic tape.




The VCR automatically enters the playback mode when a cassette without its safety tab is inserted. **The VCR won't record on a tape without a safety tab and the cassette will be ejected if the REC or REC/IRT button is pressed.** Be sure to check the safety tab before inserting a cassette.

## CASSETTE TAPES

### Insertion


**Push the video cassette gently into the slot on the front of the VCR.**

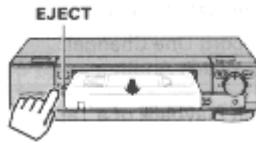
- The VCR automatically turns on and the "Tape-In" indicator  turns on when the cassette is in place.

### Removal

**Press the EJECT button on the VCR.**

The cassette will come partially out of the compartment so you can pull it out.

- The "Tape-In" indicator  turns off.
- The cassette can be ejected with the power on or off.





## DSS® BOX WITH DIGITAL INTERFACE HOOKUP–AV HOOKUP [A]

### DSS® BOX WITH DIGITAL INTERFACE HOOKUP–AV HOOKUP [A] WITH THIS HOOKUP

#### YOU CAN.....

- WATCH AVAILABLE TV OR DSS® CHANNELS
- RECORD AND PLAYBACK A DSS® CHANNEL IN THE D-VHS FORMAT WITH DSS® BOX
- RECORD AND WATCH THE SAME CHANNEL
- RECORD ONE CHANNEL AND WATCH ANOTHER
- RECORD A CHANNEL OTHER THAN DSS® AND WATCH A DSS® CHANNEL

#### Note: pic

When connecting the digital A/V cable, be careful of the orientation of its connector.

Hookup A Illustration pic

**Note:** Your VCR cannot receive RF signals from the antenna or cable through the DSS® box. Connect the antenna or cable cord to the IN FROM ANT jack of the VCR, not to the RF IN/OUT jacks of the DSS® box.

TABLE A

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	VCR	DSS® BOX		
TV				
Select and Watch Channels using TV	Select Channel to Watch			OFF (TV mode)
Select and Watch Channels using VCR	AUX or VIDEO	Select Channel to Watch		
Record and Watch the Same Channel	AUX or VIDEO	Select Channel to Record		
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record		OFF (TV mode)
Record and Watch the Same DSS® Channel	AUX or VIDEO	Select dSS	Select Channel to Watch/Record	
Watch a Channel other than DSS® and Record a DSS® Channel	Select Channel to Watch	Select dSS	Select Channel to Record	OFF (TV mode)
Watch Playback of a Tape	AUX or VIDEO			

## DSS® BOX WITH DIGITAL INTERFACE HOOKUP – S CABLE HOOKUP [B]

### DSS® BOX WITH DIGITAL INTERFACE HOOKUP – S CABLE HOOKUP [B]

#### WITH THIS HOOKUP

##### YOU CAN.....

- WATCH AVAILABLE TV OR DSS® CHANNELS
- RECORD AND PLAYBACK A DSS® CHANNEL IN THE D-VHS FORMAT WITH DSS® BOX
- WATCH DSS® CHANNELS WITH HIGHER PICTURE QUALITY
- RECORD AND WATCH THE SAME CHANNEL
- RECORD ONE CHANNEL AND WATCH ANOTHER
- RECORD A CHANNEL OTHER THAN DSS® AND WATCH A DSS® CHANNEL

##### Note: pic

When connecting the digital A/V cable, be careful of the orientation of its connector.

Hookup B Illustration pic

**Note:** Your VCR cannot receive RF signals from the antenna or cable through the DSS® box. Connect the antenna or cable cord to the IN FROM ANT jack of the VCR, not to the RF IN/OUT jacks of the DSS® box.

**TABLE B**

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	TV	VCR	DSS® BOX	
Select and Watch Channels using TV	Select Channel to Watch			OFF (TV mode)
Select and Watch Channels using VCR	AUX or VIDEO	Select Channel to Watch		
Record and Watch the Same Channel	AUX or VIDEO	Select Channel to Record		
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record		OFF (TV mode)
Record and Watch the Same DSS® Channel	AUX or VIDEO	Select dSS	Select Channel to Watch/Record	
Watch a Channel other than DSS® and Record a DSS® Channel	Select Channel to Watch	Select dSS	Select Channel to Record	OFF (TV mode)
Watch Playback of a Tape	AUX or VIDEO			

## DSS® BOX WITH DIGITAL INTERFACE HOOKUP – RF HOOKUP [C]

### DSS® BOX WITH DIGITAL INTERFACE HOOKUP – RF HOOKUP [C]

#### WITH THIS HOOKUP

##### YOU CAN.....

- WATCH AVAILABLE TV OR DSS® CHANNELS
- RECORD AND PLAYBACK A DSS® CHANNEL IN THE D-VHS FORMAT WITH DSS® BOX
- RECORD AND WATCH THE SAME CHANNEL
- RECORD ONE CHANNEL AND WATCH ANOTHER
- RECORD A CHANNEL OTHER THAN DSS® AND WATCH A DSS® CHANNEL

##### Note: pic

When connecting the digital A/V cable, be careful of the orientation of its connector.

Hookup C Illustration pic

**Note:** Your VCR cannot receive RF signals from the antenna or cable through the DSS® box. Connect the antenna or cable cord to the IN FROM ANT jack of the VCR, not to the RF IN/OUT jacks of the DSS® box.

TABLE C

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	VCR	DSS® BOX		
TV				
Select and Watch Channels using TV	Select Channel to Watch			OFF (TV mode)
Select and Watch Channels using VCR	3 or 4	Select Channel to Watch		
Record and Watch the Same Channel	3 or 4	Select Channel to Record		
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record		
Record and Watch the Same DSS® Channel	3 or 4	Select dSS	Select Channel to Watch/Record	
Watch a Channel other than DSS® and Record a DSS® Channel	Select Channel to Watch	Select dSS	Select Channel to Record	
Watch Playback of a Tape	3 or 4			

##### Switch the RF Channel

When the VCR is on, its video signal can come into your TV on either channel 3 or channel 4. You need to select the appropriate channel.

- Turn on the power of both the TV and the VCR. Press the ANT. OUT

## DSS® BOX WITH DIGITAL INTERFACE HOOKUP – RF HOOKUP [C]

button on front of the VCR. Pressing the button alternates between RFCH 03 (channel 3) and RFCH 04 (channel 4) in the VCR's display. Display the channel which is not used by a commercial channel in your area.

# DSS® BOX WITHOUT DIGITAL INTERFACE HOOKUP–AV HOOKUP [D]

## DSS® BOX WITHOUT DIGITAL INTERFACE HOOKUP–AV HOOKUP [D] WITH THIS HOOKUP

### YOU CAN.....

- WATCH AVAILABLE TV OR DSS® CHANNELS
- RECORD AND WATCH THE SAME CHANNEL
- RECORD ONE CHANNEL AND WATCH ANOTHER

### YOU CAN'T.....

- RECORD A CHANNEL OTHER THAN DSS® AND WATCH A DSS® CHANNEL

Hookup D Illustration pic

**Note:** Your VCR cannot receive RF signals from the antenna or cable through the DSS® box. Connect the antenna or cable cord to the IN FROM ANT jack of the VCR, not to the RF IN/OUT jacks of the DSS® box.

TABLE D

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	TV	VCR	DSS® BOX	
Select and Watch Channels using TV	Select Channel to Watch			OFF (TV mode)
Select and Watch Channels using VCR	AUX or VIDEO	Select Channel to Watch		
Record and Watch the Same Channel	AUX or VIDEO	Select Channel to Record		
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record		OFF (TV mode)
Record and Watch the Same DSS® Channel	AUX or VIDEO	Select L1	Select Channel to Watch/Record	
Watch a Channel other than DSS® and Record a DSS® Channel	Select Channel to Watch	Select L1	Select Channel to Record	OFF (TV mode)
Watch Playback of a Tape	AUX or VIDEO			

## DSS® BOX WITHOUT DIGITAL INTERFACE HOOKUP – RF HOOKUP [E]

### DSS® BOX WITHOUT DIGITAL INTERFACE HOOKUP – RF HOOKUP [E] WITH THIS HOOKUP

#### **YOU CAN.....**

- WATCH AVAILABLE TV OR DSS® CHANNELS
- RECORD AND WATCH THE SAME CHANNEL
- RECORD ONE CHANNEL AND WATCH ANOTHER

#### **YOU CAN'T.....**

- RECORD A CHANNEL OTHER THAN DSS® AND WATCH A DSS® CHANNEL

Hookup E Illustration pic

**Note:** Your VCR cannot receive RF signals from the antenna or cable through the DSS® box. Connect the antenna or cable cord to the IN FROM ANT jack of the VCR, not to the RF IN/OUT jacks of the DSS® box.

**TABLE E**

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	TV	VCR	DSS® BOX	
Select and Watch Channels using TV	Select Channel to Watch			OFF (TV mode)
Select and Watch Channels using VCR	3 or 4	Select Channel to Watch		
Record and Watch the Same Channel	3 or 4	Select Channel to Record		
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record		
Record and Watch the Same DSS® Channel	3 or 4	Select L1	Select Channel to Watch/Record	
Watch a Channel other than DSS® and Record a DSS® Channel	Select Channel to Watch	Select L1	Select Channel to Record	
Watch Playback of a Tape	3 or 4			

#### **Switch the RF Channel**

When the VCR is on, its video signal can come into your TV on either channel 3 or channel 4. You need to select the appropriate channel.

- Turn on the power of both the TV and the VCR. Press the ANT. OUT button on front of the VCR. Pressing the button alternates between RFCH 03 (channel 3) and RFCH 04 (channel 4) in the VCR's display. Display the channel which is not used by a commercial channel in your area.

## BASIC ANTENNA HOOKUP [F]

### BASIC ANTENNA HOOKUP [F] WITH THIS HOOKUP

#### **YOU CAN.....**

- **WATCH AVAILABLE TV CHANNELS**
- **RECORD AND WATCH THE SAME CHANNEL**
- **RECORD ONE CHANNEL AND WATCH ANOTHER**

Hookup F Illustration pic

**TABLE F**

<b>FUNCTION</b>	<b>CHANNEL SELECTION</b>		<b>VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)</b>
<b>TV</b>	<b>VCR</b>		
Select and Watch Channels using TV	Select Channel to Watch		OFF (TV mode)
Select and Watch Channels using VCR	3 or 4	Select Channel to Watch	
Record and Watch the Same Channel	3 or 4	Select Channel to Record	
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record	
Watch Playback of a Tape	3 or 4		

#### Switch the RF Channel

When the VCR is on, its video signal can come into your TV on either channel 3 or channel 4. You need to select the appropriate channel.

- Turn on the power of both the TV and the VCR. Press the ANT. OUT button on front of the VCR. Pressing the button alternates between RFCH 03 (channel 3) and RFCH 04 (channel 4) in the VCR's display. Display the channel which is not used by a commercial channel in your area.

## ADVANCED ANTENNA HOOKUP -AV HOOKUP [G]

### ADVANCED ANTENNA HOOKUP -AV HOOKUP [G]

#### WITH THIS HOOKUP

##### **YOU CAN.....**

- **WATCH AVAILABLE TV CHANNELS**
- **RECORD AND WATCH THE SAME CHANNEL**
- **RECORD ONE CHANNEL AND WATCH ANOTHER**

Hookup G Illustration pic

**TABLE G**

FUNCTION	CHANNEL SELECTION		VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
<b>TV</b>	<b>VCR</b>		
Select and Watch Channels using TV	Select Channel to Watch		OFF (TV mode)
Select and Watch Channels using VCR	AUX or VIDEO	Select Channel to Watch	
Record and Watch the Same Channel	AUX or VIDEO	Select Channel to Record	
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record	
Watch Playback of a Tape	AUX or VIDEO		



## BASIC CABLE HOOKUP [H]

### BASIC CABLE HOOKUP [H]

#### WITH THIS HOOKUP

##### **YOU CAN.....**

- **WATCH AVAILABLE CABLE CHANNELS**
- **RECORD AND WATCH THE SAME CHANNEL**
- **RECORD ONE CHANNEL AND WATCH ANOTHER**

Hookup H Illustration pic

**TABLE H**

<b>FUNCTION</b>	<b>CHANNEL SELECTION</b>		<b>VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)</b>
<b>TV</b>	<b>VCR</b>		
Select and Watch Cable Channels using TV	Select Channel to Watch		OFF (TV mode)
Select and Watch Cable Channels using VCR	3 or 4	Select Channel to Watch	
Record and Watch the Same Channel	3 or 4	Select Channel to Record	
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record	
Watch Playback of a Tape	3 or 4		

#### **Switch the RF Channel**

When the VCR is on, its video signal can come into your TV on either channel 3 or channel 4. You need to select the appropriate channel.

- Turn on the power of both the TV and the VCR. Press the ANT. OUT button on front of the VCR. Pressing the button alternates between RFCH 03 (channel 3) and RFCH 04 (channel 4) in the VCR's display. Display the channel which is not used by a commercial channel in your area.

## ADVANCED CABLE HOOKUP -AV HOOKUP [I]

### ADVANCED CABLE HOOKUP -AV HOOKUP [I]

#### WITH THIS HOOKUP

**YOU CAN.....**

- WATCH AVAILABLE CABLE CHANNELS
- RECORD AND WATCH THE SAME CHANNEL
- RECORD ONE CHANNEL AND WATCH ANOTHER

Hookup I Illustration pic

**TABLE I**

FUNCTION	CHANNEL SELECTION		VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
<b>TV</b>	<b>VCR</b>		
Select and Watch Cable Channels using TV	Select Channel to Watch		OFF (TV mode)
Select and Watch Cable Channels using VCR	AUX or VIDEO	Select Channel to Watch	
Record and Watch the Same Channel	AUX or VIDEO	Select Channel to Record	
Record One Channel Watch Another	Select Channel to Watch	Select Channel to Record	
Watch Playback of a Tape	AUX or VIDEO		

## BASIC CABLE HOOKUP -WITH CABLE BOX [J]

### BASIC CABLE HOOKUP -WITH CABLE BOX [J]

#### WITH THIS HOOKUP

**YOU CAN.....**

- WATCH AVAILABLE CABLE CHANNELS
- RECORD AND WATCH THE SAME CHANNEL

**YOU CAN'T.....**

- RECORD ONE CHANNEL WHILE YOU WATCH ANOTHER

ALL CHANNEL SELECTIONS MUST BE MADE AT THE CABLE BOX.  
BE SURE TO CONSULT YOUR CABLE BOX MANUAL FOR THE CABLE  
BOX OUTPUT CHANNEL.

Hookup J Illustration pic

TABLE J

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	TV	VCR	CABLE BOX	
Watch Cable Channels on TV	Select Cable Box Output Channel		Select Channel to Watch	OFF (TV mode)
Select and Watch Cable Channels using VCR	3 or 4	Select Cable Box Output Channel	Select Channel to Watch	
Record and Watch the Same Channel	3 or 4	Select Cable Box Output Channel	Select Channel to Watch	
Record One Channel Watch Another				
Watch Playback of a Tape	3 or 4			

#### Switch the RF Channel

When the VCR is on, its video signal can come into your TV on either channel 3 or channel 4. You need to select the appropriate channel.

- Turn on the power of both the TV and the VCR. Press the ANT. OUT button on front of the VCR. Pressing the button alternates between RFCH 03 (channel 3) and RFCH 04 (channel 4) in the VCR's display.

Display the channel which is not used by a commercial channel in your area.

## ADVANCED CABLE HOOKUP -WITH CABLE BOX [K]

### ADVANCED CABLE HOOKUP -WITH CABLE BOX [K]

#### WITH THIS HOOKUP

**YOU CAN.....**

- WATCH AVAILABLE CABLE CHANNELS
- RECORD AND WATCH THE SAME CHANNEL

**YOU CAN'T.....**

- RECORD ONE CHANNEL AND WATCH ANOTHER

ALL CHANNEL SELECTIONS MUST BE MADE AT THE CABLE BOX.  
BE SURE TO CONSULT YOUR CABLE BOX MANUAL FOR THE CABLE BOX.

Hookup K Illustration pic

**TABLE K**

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	TV	VCR	CABLE BOX	
Watch Cable Channels on TV	Select Cable Box Output Channel		Select Channel to Watch	OFF (TV mode)
Select and Watch Cable Channels using VCR	AUX or VIDEO	Select Cable Box Output Channel	Select Channel to Watch	
Record and Watch the Same Channel	AUX or VIDEO	Select Cable Box Output Channel	Select Channel to Record	
Record One Channel Watch Another				
Watch Playback of a Tape	AUX or VIDEO			

## ADVANCED CABLE HOOKUP -WITH CABLE BOX AND SPLITTER [L]

### ADVANCED CABLE HOOKUP -WITH CABLE BOX AND SPLITTER [L] WITH THIS HOOKUP

#### **YOU CAN.....**

- **WATCH AVAILABLE CABLE CHANNELS**
- **RECORD AND WATCH THE SAME CHANNEL**
- **RECORD ONE CHANNEL AND WATCH ANOTHER**

TO RECORD, ALL CHANNEL SELECTIONS MUST BE MADE AT THE CABLE BOX.

BE SURE TO CONSULT YOUR CABLE BOX MANUAL FOR THE CABLE BOX OUTPUT CHANNEL.

Hookup L Illustration pic

**TABLE L**

FUNCTION	CHANNEL SELECTION			VCR indicator (Press the VCR/TV mode select button to turn the VCR indicator on or off)
	TV	VCR	CABLE BOX	
Watch Cable Channels on TV	Select Channel to Watch			OFF (TV mode)
Select and Watch Cable Channels using VCR	AUX or VIDEO	Select Cable Box Output Channel	Select Channel to Watch	
Record and Watch the Same Channel	AUX or VIDEO	Select Cable Box Output Channel	Select Channel to Watch	
Record One Channel Watch Another	Select Channel to Watch	Select Cable Box Output Channel	Select Channel to Record	
Watch Playback of a Tape	AUX or VIDEO			

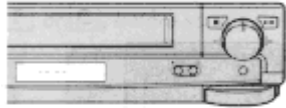
## SETTING THE CLOCK

### SETTING THE CLOCK

**Note:** An antenna, cable, or DSS® must be connected to the VCR before you begin this operation.

#### Tips

You'll need to set the clock when first hooking up your VCR, and any time the power goes out for more than 1 hour. When you first plug in the VCR or after a power outage, the clock display will read "-- : --".



#### Auto clock set function

This function can set the VCR clock to DSS® box clock automatically only when the VCR is connected to a DSS® box with digital interface function. It also automatically sets the time differences between various time zones and sets the time during Daylight Saving Time (D.S.T). The auto clock set function operates each time the VCR is turned off.

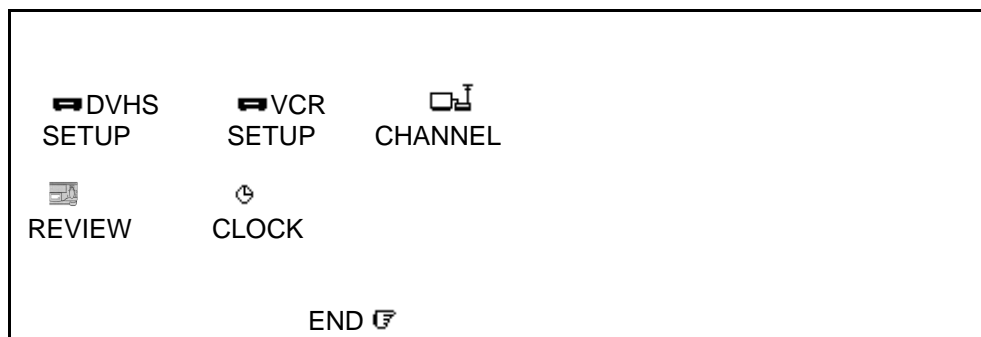
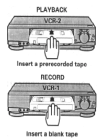
- When the VCR is connected to a DSS® box via a digital A/V cable, the time can only be set by the auto clock function. You cannot set the clock manually.
- When the clock is set automatically, the displayed time may drift from the current time by up to one second.
- When the VCR is connected to a DSS® box without digital interface function, set the clock manually by using the following procedure.

#### To set the clock manually

pic

##### 1 Press the GUIDE button.

The main on-screen menu will appear on the TV screen.



## SETTING THE CLOCK

**2 Press the (5) button to bring up the "CLOCK SET" menu.**

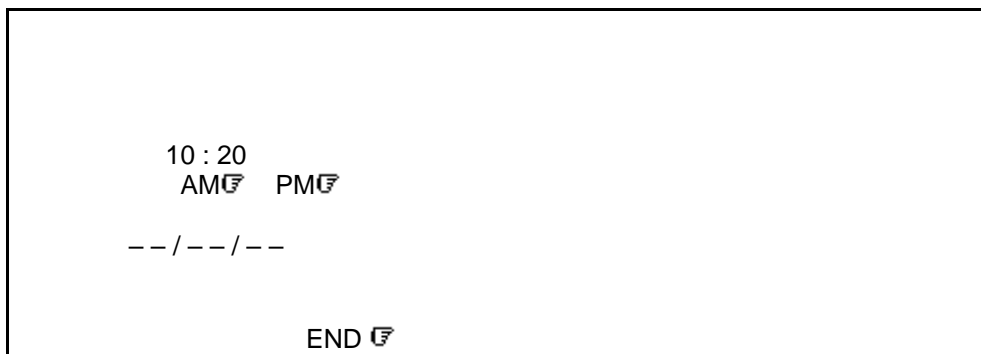
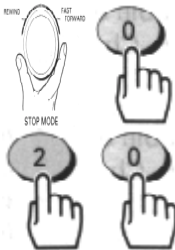


- The white dash "-" appears for the item to be changed on the screen as you proceed.
- If the clock has automatically been set, the "CLOCK SET" menu will not appear.

**3 Press the number buttons to fill the hour and minutes.**

- For times with only one number (1-9) press the (0) button first, then the hour or minute. For example, if it is now 10:20AM, press (1)(0)(2)(0). "AM" and "PM" will now appear on the screen.

### Example



## SETTING THE CLOCK



10 : 20 AM

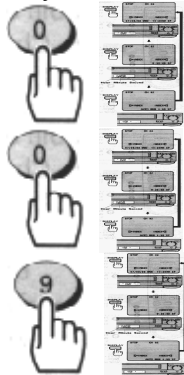
- / - - / - -

END 

**5 Press the number buttons to fill in the number of the month, then the day then the year.**

- For dates with only one number (1-9) press the (0) button first, then the date.

For example, if today is July 8 1998, press (0)(7)(0)(8)(9)(8). The correct day of the week will appear by itself.



10 :20 AM

07 / 08 / 98 WED

END 



## SETTING THE CLOCK

### 6 Press the **GUIDE** button.

The VCR clock is now set, and should show the correct time of day on the VCR's display.



### Notes:

- The clock uses the 12-hour system. You set it for AM or PM.
- An illogical time (like 13 for the hour or 20 for the month) will not be accepted.
- If you press the wrong digit, exit the screen by pressing GUIDE and recall the screen to enter the correct setup.

## PRE-TUNING THE VCR TUNER

### PRE-TUNING THE VCR TUNER

**Note:** An antenna or cable must be connected to the VCR before you begin this operation.

#### Presetting the received channels without using a cable box (Hookups [A], [B], [C], [D], [E], [F], [G], [H] or [I])

pic

**1 Press the POWER button to turn on the VCR.**

pic

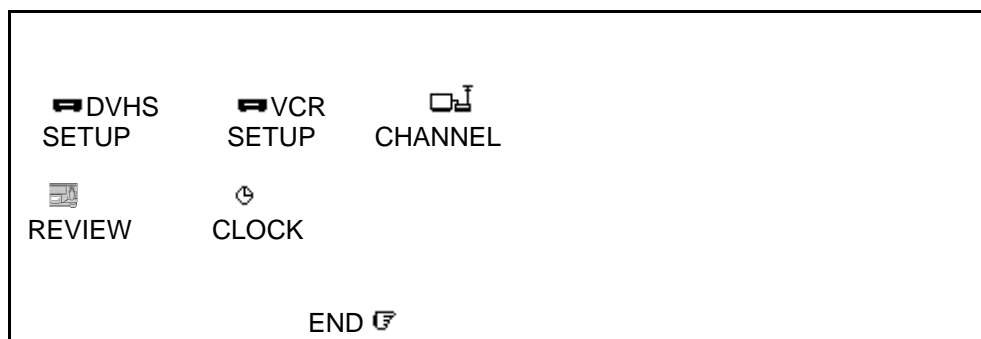
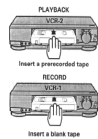
**2 Turn on the TV and select the video channel (3 or 4).**

Or, if you are hooked up with an audio/video cable, set the TV to AUX or VIDEO.



**3 Press the GUIDE button.**

The main on-screen menu will appear on the TV screen.



**4 Press the (3) button to select the CHANNEL PRESET operation.**



1 CHANNEL <CATV1>  
2 AUTO CHANNEL SET

## PRE-TUNING THE VCR TUNER

3 ADD / ERASE CHANNEL

END 

**5 Press the (1) button to select the type of receiving setup you have:**



1 CHANNEL < ANT >  
2 AUTO CHANNEL SET  
3 ADD / ERASE CHANNEL

END 

ANT: Internal or external antenna

CATV1: Ordinary cable

CATV2: Alternate cable (If CATV1 doesn't give you the channels you expect).

**6 Press the (2) button.**



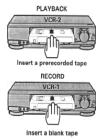
1 CHANNEL < ANT >  
2 AUTO CHANNEL SET  
3 ADD / ERASE CHANNEL

END 

The VCR will automatically store channels received in your area. It takes about 2 - 3 minutes. After the channels are stored in memory, the channel with the lowest number appears in the VCR's display.

**7 Press GUIDE to return to regular viewing.**

## PRE-TUNING THE VCR TUNER



**Note:** Your VCR is capable of receiving 68 broadcast TV channels (VHF 2 – 13, UHF 14 – 69) and cable channels (CATV 1 – 125). In some areas channels cannot be received when CATV1 is selected. In this case, select CATV2 in the receiving setup.

## PRE-TUNING THE VCR TUNER (cont.)

pg. 2

**When automatic presetting of channels are finished**

**Press the CH (channel) button (or numbered buttons) to check the channels you can receive.**



Selects Channel "7"

**Note:** If no channels have been set or a clear picture does not appear, check the antenna or cable connection.

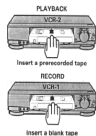
## To add or erase channels

The auto channel set procedure may memorize channels that are blank, have snowy pictures, or interference. You may skip these channels by erasing them. Very weak stations might not be memorized at all. You may receive these stations by adding them.

pic

### 1 Press the GUIDE button.

The main on-screen menu will appear on the TV screen.



DVHS SETUP VCR SETUP CHANNEL



## PRE-TUNING THE VCR TUNER

REVIEW

CLOCK

END 

**2 Press the (3) button to select the CHANNEL PRESET operation.**






- 1 CHANNEL <CATV1>
- 2 AUTO CHANNEL SET
- 3 ADD / ERASE CHANNEL

END 

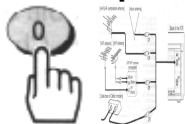
**3 Press the (3) button to select ADD/ERASE CHANNEL.**



**CHANNEL 02**  
SELECT CHANNEL  
ERASE   
ADD  END 




**4 Use the number buttons to select the number of the channel you want to add or erase.**

**Example**






**Selects channel "7"**

## PRE-TUNING THE VCR TUNER

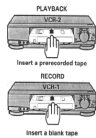
**CHANNEL 07**  
SELECT CHANNEL  
ERASE   
ADD  END 

**5 Press the STOP button to delete the channel, or press the PLAY button to add it.**

pic  
or  
pic

**CHANNEL 07 ERASED**  
SELECT CHANNEL  
ERASE   
ADD  END 

**6 Press the GUIDE button to return to regular viewing.**



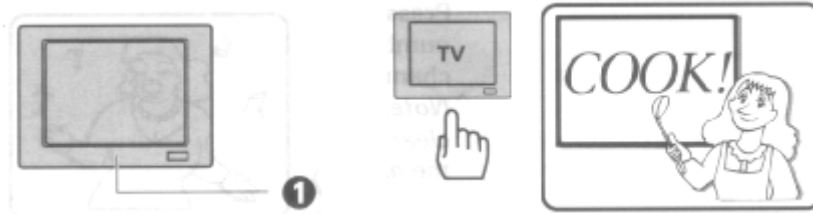
## PRE-TUNING THE VCR TUNER (cont.)

pg. 2

### Auto blue setting

**1 Turn on the TV and select the video channel (3 or 4).**

Or, if you are hooked up with an audio/video cable, set the TV to AUX or VIDEO.

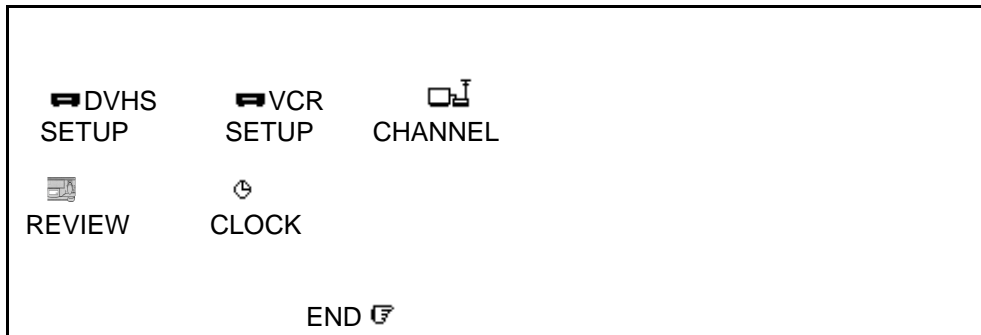
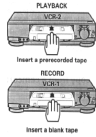


pic

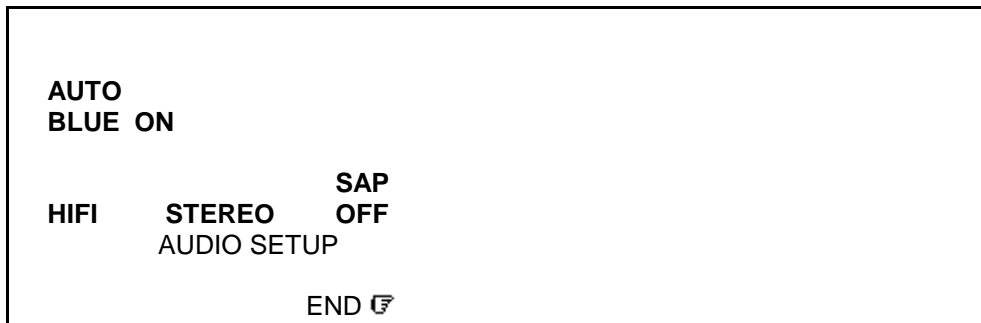
**2 Press the GUIDE button.**

The main on-screen menu will appear on the TV screen.

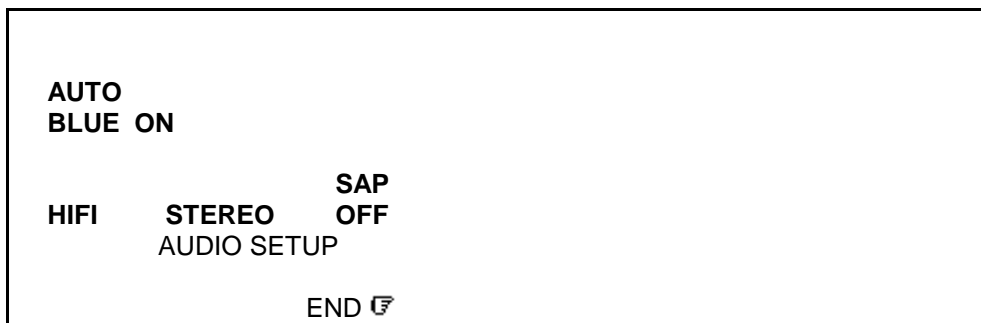
## PRE-TUNING THE VCR TUNER



**3 Press the (2) button to select VCR SETUP.**



**4 Press the (1) button to select AUTO BLUE "ON" or "OFF".**



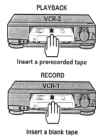
**ON:** The screen becomes blue and mutes sound when a channel without a broadcast signal on the VCR or a channel on which broadcasting has finished.

## PRE-TUNING THE VCR TUNER

- If the signal is too strong, this function may not operate even if you specify "ON". During playback this function does not operate.

**OFF:** The AUTO BLUE feature is switched off.

### 5 Press the **GUIDE** button to end the setting.





## PLAYBACK

### PLAYBACK

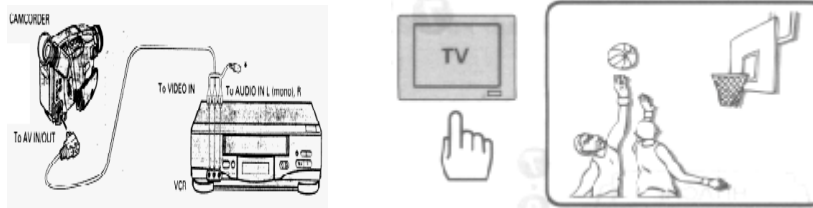
#### To playback a recorded tape

##### Notes:

- The VCR and DSS® box must be connected via a digital interface A/V cable for D-VHS playback.
- Playback may not be possible immediately after the digital A/V cable has been unplugged or plugged in. Wait for at least 15 seconds and then start playback.

##### 1 Turn on the TV and select the video channel (3 or 4).

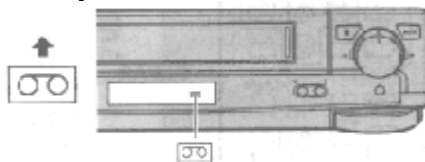
Or, if you are hooked up with an audio/video cable, set the TV to AUX or VIDEO.



##### 2 Insert a recorded tape.

The power comes on automatically and the tape indicator lights on the display.

- When a cassette without its safety tab is inserted, playback starts automatically.

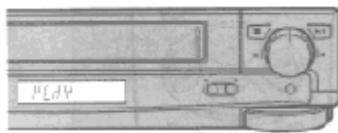


pic

pic

##### 3 Press the PLAY button to start playing the tape.

- When you connect the VCR and DSS® box via a digital A/V cable and play back a D-VHS tape, the D-VHS indicator will light and the VCR will automatically enter the D-VHS playback mode.



pic

pic

**Note:** It takes several seconds until a picture appears.

- If the digital A/V cable comes unplugged during D-VHS playback, playback will stop. Re-connect the digital A/V cable and start playback again.

## PLAYBACK

**4 Press the STOP button to end playback.**

pic

### Rewinding the tape

When the video cassette reaches the end of the tape, the VCR will stop and automatically rewind the tape.

- If you press the **POWER** button while the tape is rewinding, the power will not shut off until the tape has been completely rewound. You may also rewind the tape manually at any time.

#### Manual Rewind

pic

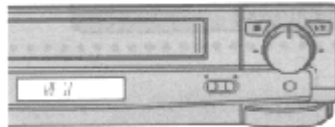
**1 Press the STOP button to end playback.**

pic

**2 Press the REW button.**

The VCR rewinds the tape all the way to the beginning, then stops.

- Press the **EJECT** button on the VCR to eject the tape.



pic

## PLAYBACK (cont.)

pg. 2

### Rewinding the tape

#### Movie Return

If your videocassette has the safety tab removed, the VCR will stop and automatically rewind the videocassette, eject it, and turn off the power when it reaches the end of the tape or a blank section of tape which lasts for more than 30 seconds.

**Note:** This function works only in **PLAYBACK** mode, not in **RECORDING** mode.

### To remove noise from the picture

#### Auto Tracking

The auto tracking feature will start and adjust playback automatically to eliminate any static lines or picture noise that may appear on the screen:

- when you insert a tape and press the **PLAY** button,
- when you press the **PLAY** button on the remote control during playback,
- or
- when the playback speed (**STD**, **SP** or **EP**) changes during playback.

## PLAYBACK

### Manual Tracking

Scratched tapes or poorly recorded tapes may require additional picture adjustment. You can do this with the remote control.

**1 Press the CH (▶▶ or ▼) button on the remote control or TRACKING button on the VCR when viewing a cassette.**

Press either the ▶▶ or ▼ buttons until picture is clear.

pic

pic

- During playback, the tracking level meter (with a number) will appear in the VCR's display. Press the ▶▶ or ▼ button to adjust the playback level so the number is the largest.

**Note:** When manual tracking has been activated, auto tracking will not operate until you press the PLAY button on the remote control during playback or remove the tape and reinsert it to play it back.

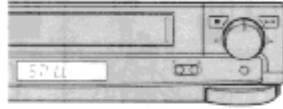
## SPECIAL PLAYBACK EFFECTS

### SPECIAL PLAYBACK EFFECTS

#### Variable speed playback

##### Still Playback (Pause)

Press the **PAUSE/SELECT** button on the remote control or **PLAY/STILL** on the VCR to still the tape during play.



pic pic

The picture will "freeze". You may see some minor noise or interference on the screen. This is normal.

- To resume play, press the **PLAY** button or **PAUSE/SELECT** (**PLAY/STILL**) button again.

pic

**Note:** The sound is muted and cannot be heard during "Special Playback Effects".

##### Notes:

- It takes several seconds until a picture appears during D-VHS playback.
- After 1 minute in the **PAUSE** mode, the VCR automatically switches to **STOP** mode to protect the tape.
- If noise bars appear on the TV screen during the **PAUSE** mode, first set the VCR to the **SLOW** mode by using the shuttle ring and then press the **CH** (▶▶ or ▼) button on the remote control to minimize the noise bars (see page 28).
- If the screen jitters during **PAUSE**, press the **CH** (▶▶ or ▼) button to minimize the jitter.

#### Visual Search

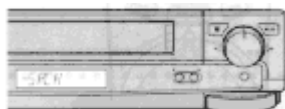
This function let you search backward and forward through the videotape while viewing it.

##### Notes:

- During D-VHS playback, a black screen will appear in the visual search mode.
- The time counter will appear on the TV screen, but watch the LCD on the VCR for the accurate counter value.

##### During play:

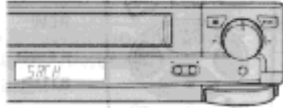
Press the **REW** button to search in reverse.



pic

Press the **F.FWD** button to search ahead.

## SPECIAL PLAYBACK EFFECTS



pic

- Press the PLAY button to return to normal playback.
- Press REW or F.FWD and hold it; you can search backward or forward through the tape at a higher speed while viewing it.**
- Press PLAY and REW, then hold REW for backward search at a higher speed.
- Press PLAY and F.FWD, then hold F.FWD for forward search at a higher speed.
- Release REW or F.FWD to return to normal playback.
- It takes several seconds until a picture appears during D-VHS playback.

## SPECIAL PLAYBACK EFFECTS (cont.)

pg. 3

### Choosing a mode for audio playback

The VCR records the same audio on both the Hi-Fi and linear tracks on the tape. The Hi-Fi sound is recorded on separate left and right stereo channels. Monaural sound is recorded on the linear track.

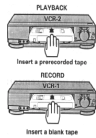
To enjoy Hi-Fi sound, connect your VCR to a stereo television or amplifier/receiver using the audio/video jacks (see page 49).

**Note:** You cannot select Hi-Fi or linear mode during D-VHS playback.

### How to select playback audio

pic

**1 Press the GUIDE button.**



**2 Press the (2) button to select the VCR SETUP operation.**



AUTO  
BLUE ON

HIFI

STEREO

AUDIO SETUP

SAP  
OFF

## SPECIAL PLAYBACK EFFECTS

END 

### 3 Press the (4) button to select "HIFI" or "LINEAR".

- Select **Hi-Fi** to playback sound recorded on the Hi-Fi track and for normal use.

The **L** and **R** indicators will light in the VCR's display panel.

- Select **LINEAR** to play back the sound recorded on the linear monaural track. Also, if the audio sounds distorted or unusual or there is no audio, select LINEAR.

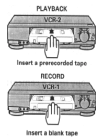


AUTO  
BLUE ON

LINEAR      STEREO      SAP      OFF  
                 AUDIO SETUP

END 

### 4 Press the GUIDE button to end the setting.



## SHUTTLE CONTROL

### SHUTTLE CONTROL

#### Using the shuttle ring on the remote control

The shuttle feature lets you control all the playback functions – PLAY, PAUSE, SLOW MOTION, and SEARCH – using one convenient ring. If the shuttle ring is operated when the key function buttons are illuminated, the illumination goes off.

#### How to use the shuttle ring

pic

##### [A] Turn the shuttle ring during playback or still playback (pause).

- As you turn the ring, you get different playback speeds and forward or reverse motion.
- Try using the shuttle to explore backward and forward through your next video.

pic

##### [B] Turn the ring while in the stop mode to fast forward or rewind the tape.

- The tape continues to be wound even after you release the dial.

pic

#### Notes:

- If noise bars appear on the TV screen during the **SLOW/STILL** modes, turn and hold the shuttle ring in the **SLOW** position, then press the CH (▶ or ▼) button on the remote control to minimize the noise bars. The noise bars are then eliminated automatically in the **STILL** mode.
- Since thin videotape is used in T-180 and longer cassettes, do not repeatedly perform the following operations with these tapes.
  - Fast forward, rewind, slow play
  - Insertion and ejection of tapes
- During D-VHS playback, slow motion and reverse playback do not function.

## USING THE "INDEX" FEATURE

### USING THE "INDEX" FEATURE

#### To find specific sections on a tape using the "INDEX" feature

##### Jump to an Index Mark with INDEX

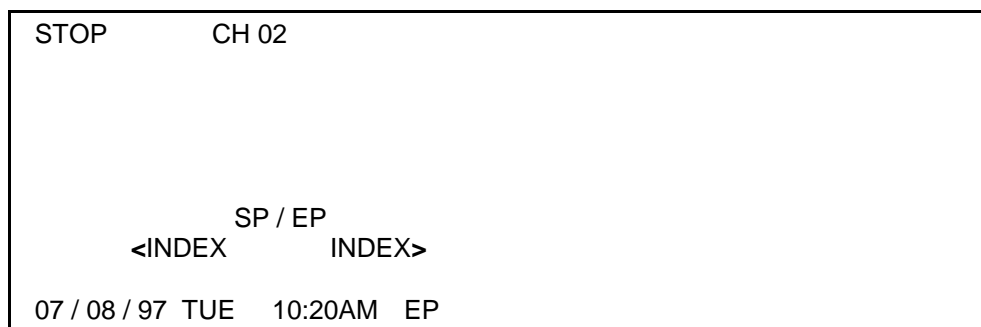
A quick way to access specific program segments is with the index search feature. This lets you move through a tape that has several recordings on it by searching for the INDEX "mark". This function only works with recordings that have been set up with indexing. Your VCR will automatically create an invisible "INDEX" mark when you start recording, or when you press the PAUSE button during recording; change the channel and press the PAUSE again to restart recording.

pic

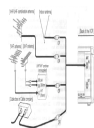
##### 1 Press the DISP/INFO button in the stop mode.

The index screen appears on TV.

pic



##### 2 Press the (7) button for rewind or the (9) button for forward to begin the index search.



or



(rewind) (forward)



- The tape rewinds or fast forwards until an index mark is detected. During this search, the word INDEX is displayed at the top left corner of the



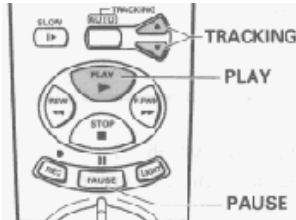
## USING THE "INDEX" FEATURE

screen.

- When the VCR finds an index mark, it plays 15 seconds of the program that begins at that spot.

**3 If this is the program you were looking for, press the PLAY button for normal playback.**

- To stop the index search before an index mark is reached, press the STOP button.



pic

**Note:** If there are no index marks on the tape, the VCR will just rewind to the beginning or fast forward to the end.

## VIEWING THE ON-SCREEN DISPLAY

### VIEWING THE ON-SCREEN DISPLAY

#### **Switching between the clock, time counter and time of remaining tape**

Press the DISP/INFO button while the on-screen display is displayed. The on-screen display switches in the order below together with the VCR's display.

pic

On-Screen and VCR Displays Illustration pic

**Press the DISP/INFO button to see the clock.**

**Press the DISP/INFO button a second time to see just the time counter.**

#### **Notes:**

- The linear time counter operates only if there is something recorded on the tape.
- The counter changes to 0:00:00 when the tape is ejected.

**Press the DISP/INFO button a third time to see the tape remaining time.**

**Note:** Immediately after the tape is inserted, "-- : --" will appear. 2 minutes after playback or recording is started, the tape remaining time is displayed.

Press the CLEAR/EXIT button repeatedly to switch the type of the tape used. The correct remaining time will appear.

AUTO: T-120 or shorter tape

T-160: T-140 or T-160 tape

T-180: T-180 tape

T-210: T-210 tape

#### **Notes:**

- The tape remaining time is not displayed correctly for a tape without any recordings or tapes other than T-30/60/90/120/140/160/180/210.
- The remaining time may not be displayed correctly during fast forwarding or rewinding.
- During D-VHS recording and playback, the above on-screen display will not appear.

## INDEX WITH THE TIME COUNTER

### INDEX WITH THE TIME COUNTER

#### To find specific sections on a tape

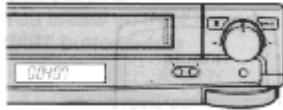
##### Indexing with the Time Counter

You can set the time counter to memorize a certain point in the video programming, and you can return to that point automatically.

pic

##### 1 Press the DISP/INFO button two or three times.

The counter will appear in the VCR's display.



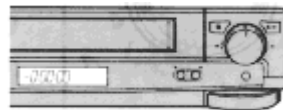
pic

##### 2 Begin recording or playing back a tape.

pic

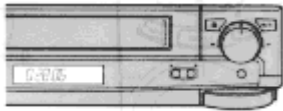
##### 3 At the point that you want to go back to, press the CLEAR/EXIT button.

This resets the counter to 0:00:00.



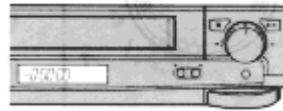
pic

##### 4 Press the STOP button when you are done recording or playing back the tape.



pic

##### 5 Press the REW button to rewind the tape.



pic

It will automatically stop at the spot where you cleared the counter in step 3.

- Press the PLAY button to watch the tape from the selected spot.

**Note:** Press the DISP/INFO button to turn the counter display off. The selected spot will stay in memory until you set a new one or until the tape is ejected.

## VHS RECORDING STEP

### VHS RECORDING STEP

#### Before you record

**Note:** The cassette safety tab must be in place in order to record.

The VCR must be hooked up properly for recording. See the Simple Hookups at the beginning of this manual.

#### Copyright infringement

##### warning

**To re-record on a cassette which has its safety tab removed.**



Cover the hole with cellophane tape.

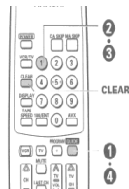
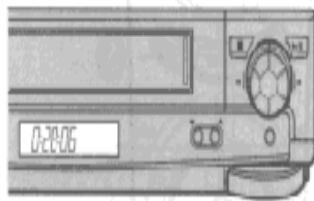
Most television programs and films are copyrighted. This means that someone has legal rights governing the reproduction and distribution of this material. In certain circumstances, copyright law may apply to private in-home taping of copyrighted materials. In most cases, it is okay to record for personal use, as long as you do not sell the material. You must act responsibly in this area – check into the matter if you are unsure.

#### Basic recording steps

**Note:** You may use a blank tape or you may record over a previously recorded (erasable) tape.

##### 1 Turn on the TV and select the video channel (3 or 4).

Or, if you are hooked up with an audio/video cable, set the TV to AUX or VIDEO.

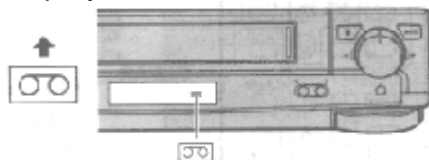


pic

##### 2 Insert a blank or erasable tape.

pic

The power comes on automatically and the tape indicator lights on the display.



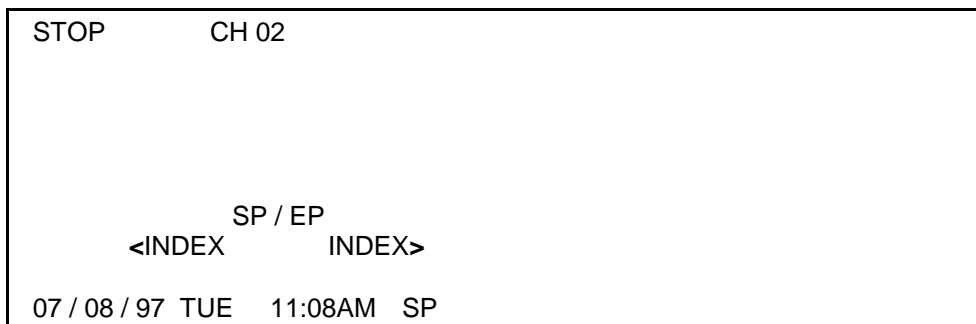
- If a cassette without its safety tab is inserted, playback starts automatically, and you cannot complete the record operation.

pic

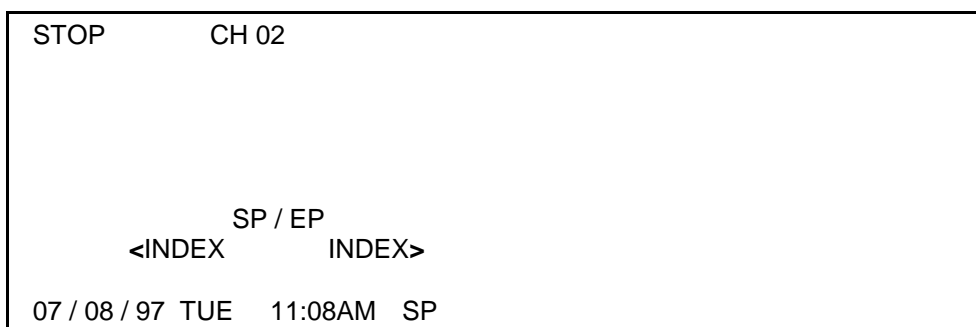
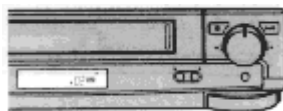
## VHS RECORDING STEP

### 3 Press the DISP/INFO button.

This screen appears on the TV.  
pic



### 4 Press the (5) button to select SP (standard play, for the best picture quality) or EP (extended play, for the longest recording time on a single tape).



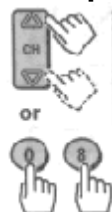
- An indicator on the VCR's display shows which speed is selected.

## VHS RECORDING STEP (cont.)

pg. 3

### 5 Press the CH (▶▶ / ▼) button or the number buttons to select the channel you want to record.

Example: Select channel 8.

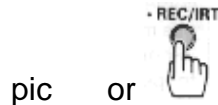


- 100/ENT and (2) and (4) for channel 124.

pic

## VHS RECORDING STEP

**6 Press the REC button on the remote control or the REC/IRT button on the VCR.**



Recording will start and the REC indicator on the VCR will light red.

### Notes:

- Recording will not start unless the cassette has the safety tab in place. If this tab has been removed, the VCR will eject the tape.
- Press the PAUSE/SELECT button to set the VCR to the recording pause mode. Press the button again to re-start recording.
- If you stay in PAUSE mode for more than 5 minutes, the VCR automatically switches to STOP mode to protect the tape.

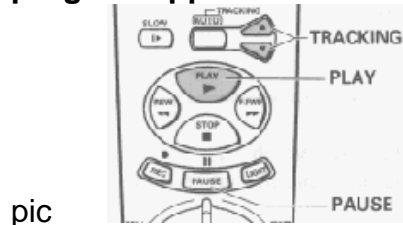
**7 Press the STOP button to finish recording.**

pic pic

**To watch a DSS® program while recording a program other than DSS®**

pic

**1 Press the DSS/VCR button on the remote control so that a DSS® program appears on the TV screen.**



**2 Use the DSS® box to select the DSS® channel you want to view.**

- To view the program being recorded, press the DSS/VCR button on the remote control again.

## D-VHS RECORDING SETUP

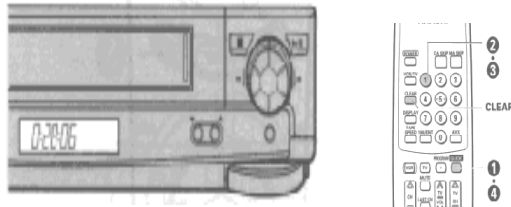
### D-VHS RECORDING SETUP

#### Setup Procedure (Hookups [A], [B] or [C])

Perform the following program D-VHS recording DSS® programs:

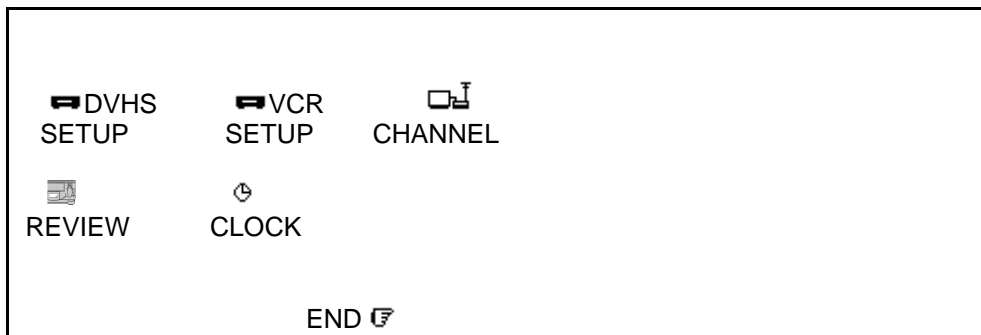
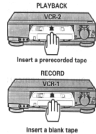
**1 Turn on the TV and select the video channel (3 or 4).**

Or, if you are hooked up with an audio/video cable, set the TV to AUX or VIDEO.

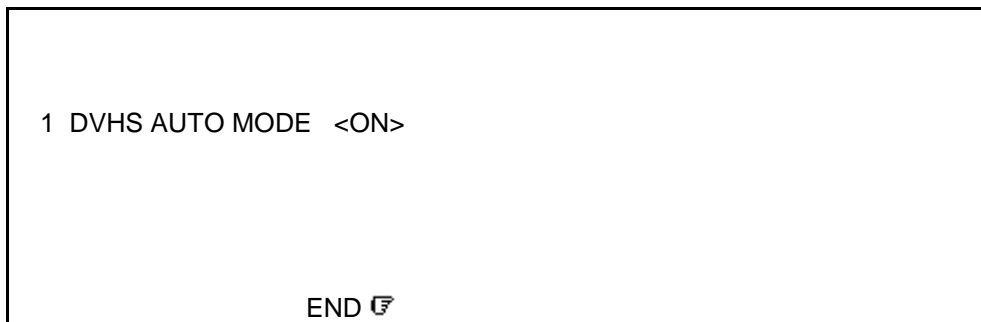


**2 Press the GUIDE button.**

The main on-screen menu will appear on the TV screen.



**3 Press the (1) button to select the D-VHS SETUP operation.**



**4 Press the (1) button to select D-VHS AUTO MODE <ON> or <OFF>.**

## D-VHS RECORDING SETUP

1 DVHS AUTO MODE <ON>

END 

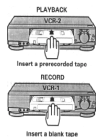
**<ON>:** When recording DSS® programs on D-VHS tape in the D-VHS format. Normally, select <ON>.

### Notes:

- When the VHS tape is inserted, DSS® programs will be recorded in the VHS format.
- Any section guarded against copying (where a copy protect signal is inserted) will be recorded in the VHS format.
- If the digital A/V cable is not connected, DSS® programs will be recorded in the VHS format.

**<OFF>:** When VHS or D-VHS tape is inserted, DSS® programs will be recorded in the VHS format.

### 5 Press GUIDE to end the setting.





## D-VHS RECORDING STEP

### D-VHS RECORDING STEP

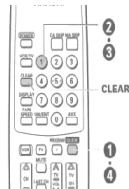
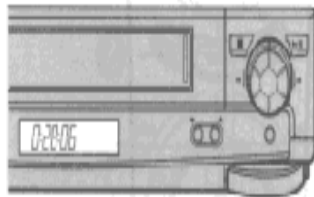
#### Basic recording steps

##### Notes:

- A D-VHS tape should be used for D-VHS recording.
- The VCR and DSS® box must be connected via a digital A/V cable.
- You may use a blank tape or you may record over a previously recorded (erasable) tape.
- D-VHS recording will automatically be done in the STD mode. The recording speed will not appear in the VCR's display.
- Recording may not be possible immediately after the digital A/V cable has been unplugged or plugged in. Wait for at least 15 seconds and then start recording.

#### 1 Turn on the TV and select the video channel (3 or 4).

Or, if you are hooked up with an audio/video cable, set the TV to AUX or VIDEO.



pic

#### 2 Insert a blank or erasable tape with the mark.

The power comes on automatically and the tape indicator lights on the display.

- If a cassette without its safety tab is inserted, playback starts automatically, and you cannot complete the record operation.

pic

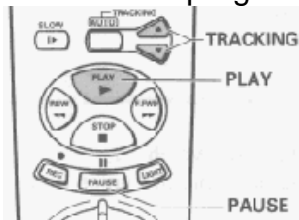
#### 3 Press the DSS/VCR button on the remote control so that a DSS® program appears on the TV screen.

pic

- The dSS indicator will light in the VCR's display.

#### 4 Use the DSS® box to select the DSS® channel you want to record.

- The DSS® program will appear.



#### 5 Make sure the D-VHS indicator lights.

pic

pic

**6 Press the REC button on the remote control or the REC/ITR button on the VCR.**



pic or pic

Recording will start and the REC indicator on the VCR will light red.

**Notes:**

- Recording will not start unless the cassette has the safety tab in place. If this tab has been removed, the VCR will eject the tape.
- Press the PAUSE/SELECT button to set the VCR to the recording pause mode. Press the button again to re-start recording.
- If you stay in PAUSE mode for more than 5 minutes, the VCR automatically switches to STOP mode to protect the tape.
- If the digital A/V cable comes unplugged during D-VHS recording, recording will stop.
- Any section guarded against copying (where a copy protect signal is inserted) will be recorded in the VHS format.

**7 Press the STOP button to finish recording.**

pic

## RECORDING A PROGRAM - RECORDING TIPS

### RECORDING A PROGRAM - RECORDING TIPS

#### To watch one program while recording another

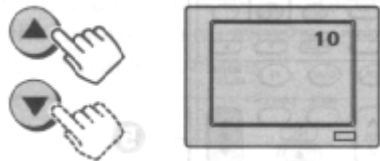
pic

**1 Once you have set the VCR for recording, press the VCR/TV button.** The VCR indicator disappears. Now, you will be viewing through your TV only.



pic

**2 Switch channels using your TV controls or the VCR remote, if it's programmed to control your TV**



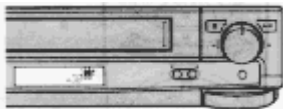
#### Notes:

- You can check on the recording by pressing **VCR/TV** again. This will switch you back to viewing through the VCR, and you'll see the program you are recording.
- **If you're hooked up with an audio/video cable:** Switch the TV from **AUX** or **VIDEO** mode back to the TV mode, then select the channels you want to watch, as described in Step 2. Switch TV back to **AUX** or **VIDEO** to monitor your recording.

#### To change the channel being recorded

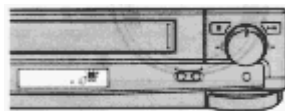
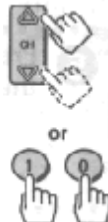
pic

**1 Press the PAUSE/SELECT button to stop the recording temporarily.**



pic

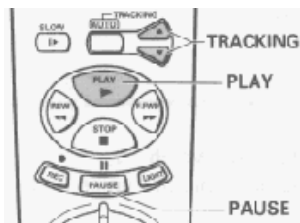
**2 Press the CH (▶/▼) button or number buttons to change the channel to the one you prefer.**



**Use the DSS® box to select the DSS® channel you want to record.**

- The DSS® program will appear.

## RECORDING A PROGRAM - RECORDING TIPS



**3 Press the PAUSE/SELECT button to continue recording.**



pic

### Automatic Indexing

Your VCR will automatically create an invisible **"INDEX"** mark when you start recording, or when you press the PAUSE button during recording; change the channel and press the PAUSE again to restart recording. During playback, the Index Search feature will let you move through a tape that has several recordings on it by searching for the **"INDEX"** mark. See Page 32, **"Jump to an Index Mark with INDEX"**.

## RECORDING A PROGRAM -RECORDING TIPS (cont.)

pg. 4

### To record a Second Audio Program (SAP)

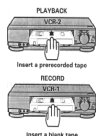
Some stations transmit a Second Audio Program – such as in a second language. If a station broadcasts in SAP, the SA indicator will display on your TV screen.

You can set the VCR to record a second audio program by activating the SAP option.

**How to set the SAP option.**

pic

**1 Press the GUIDE button.**

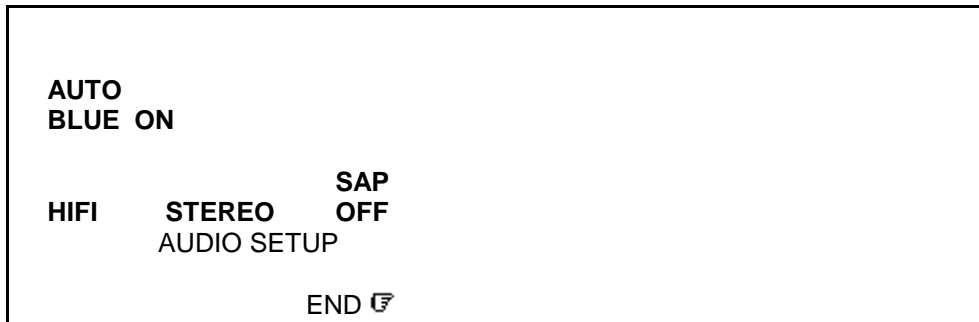


**2 Press the (2) button to select the VCR SETUP operation.**

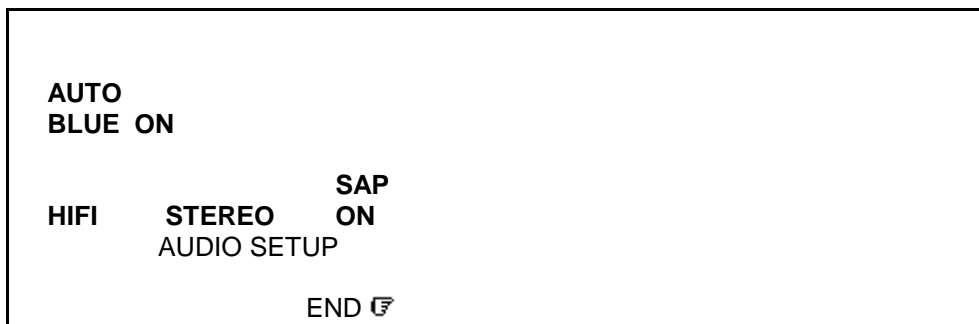


**3 Press the (6) button to set the SAP option to "ON".**

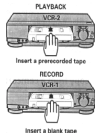
## RECORDING A PROGRAM - RECORDING TIPS



**4 Press the (5) button to set the STEREO/MONO option to "STEREO".**



**5 Press the GUIDE button twice to end the setting.**



**6 Follow the Step 1 through 5 on "VHS Recording Step" on pages 35 and 36.**

### Stereo vs. mono sound

When you select the STEREO option in the initial setup operation, your VCR records in stereo any station that broadcasts stereo sounds. When a TV channel broadcasts in stereo, you'll see a stereo indicator on the TV screen.

Set to MONO if the stereo signal is weak and the sound is too "noisy".



## RECORDING A PROGRAM - RECORDING TIPS

BLUE ON

HIFI

STEREO

SAP

OFF

AUDIO SETUP

END 

**Note:** When you select MONO, sound is recorded as mono even when a channel broadcasts in stereo.

## INSTANT RECORDING TIMER

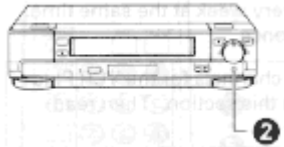
### INSTANT RECORDING TIMER

#### Using the Instant Recording Timer (IRT)

The Instant Recording Timer (REC/IRT button on the VCR) will let you make a simplified timer recording without having to use the programming timer. In order to set the IRT properly the clock must be set before starting.

**1 Follow the steps 1 through 5 on "VHS recording step".**

**2 Press the REC/IRT button twice to indicate the recording time on the display.**



REC/IRT Settings Illustration pic

- You may increase the recording time by 30 minutes each time you press the REC/IRT button.
- While you are recording, the remaining recording time is shown on the VCR display.
- At the end of your recording, the display will read "0:00", recording will stop automatically, and the VCR will turn itself off.

#### **To stop recording while in the IRT mode:**

**1 Press the POWER button.**

**2 Press the STOP button within 10 seconds.**

pic

- This can be done either on the VCR or with the remote control.

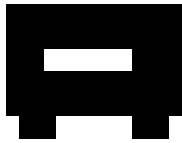
## DELAYED RECORDING

### DELAYED RECORDING

#### Setting the VCR to record later

**Note:** The cassette safety tab must be in place in order to record.

**To re-record on a cassette which has its safety tab removed.**



Cover the hole with cellophane tape.

With the delayed recording feature, you can set this VCR so that it automatically turns on and records programs whenever you like – without your being around! You can record a program one time only, or you can automatically record a show every weekday or every week at the same time. You can preset as many as 8 timed recordings at once.

#### Before you begin

Assemble the information you need for timed recording:

- Be sure that the clock is set to the correct time
- Date and day of the program
- Starting time
- Ending time
- Channel to be recorded
- Blank or erasable videocassette (safety tab intact)

#### Method for programming a DSS® program for delayed D-VHS recording

- Insert a D-VHS tape into the VCR.
- Connect the VCR and DSS® box via a digital A/V cable.
- Use the DSS® box to select the program for delayed D-VHS recording. (Refer to the DSS® box manual.)
- Turn off the VCR.

**Note:** Any section guarded against copying (where a copy protect signal is inserted) will be recorded in the VHS format.

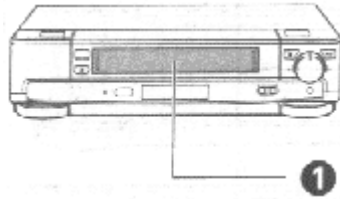
#### Delayed Recording Steps

You set up the delayed recording using the on-screen Easy Guide System.

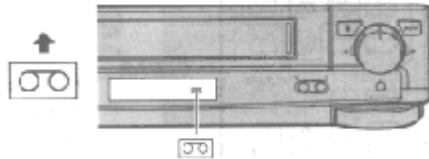
**1 Insert blank or erasable tape.**



## DELAYED RECORDING



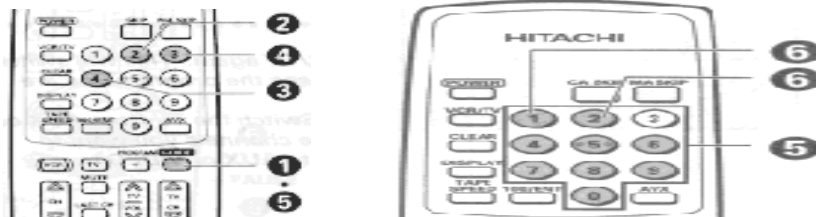
- The power comes on automatically and the tape indicator lights on the display.



- If a cassette without its safety tab is inserted, playback starts automatically and timed record won't operate.

### 2 Turn on the TV and select the video channel (3 or 4).

Or, if you are hooked up with an audio/video cable, set the TV to AUX or VIDEO.



## DELAYED RECORDING (cont.)

pg. 4

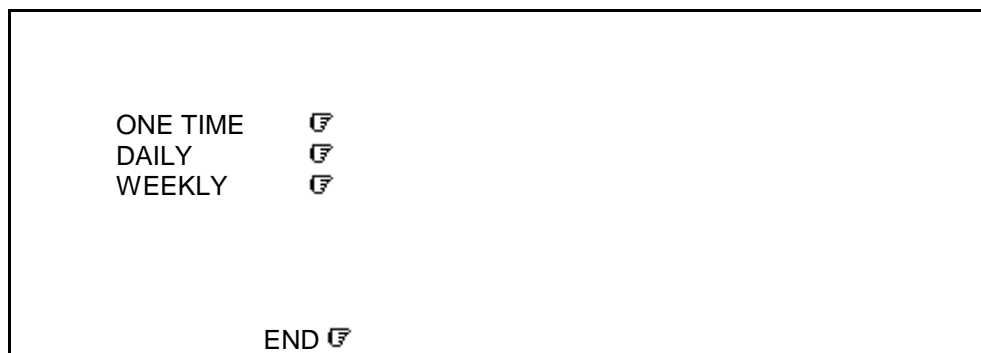
**EXAMPLE:** Set the VCR to record "**one time**" in the analog format, a program on **Channel 8** that starts at **6:00 PM** and ends at **6:30 PM** on **7/10/98**, at the **EP** recording speed.

pic

### 3 Press the PROGRAM button.

- The screen will appear.

pic



## DELAYED RECORDING

### Types of Delayed Recordings

ONE TIME	Records one show at a particular date and time.
DAILY	Records a show at the same time every day of the week, Monday through Friday.
WEEKLY	Records a show at the same day and time every week.

#### 4 Press the (1) button to bring up the screen for One Time Recording

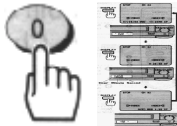


-- --:-- ~--:--

--/--/-- SP

END

#### 5 Press the (0) and (8) buttons to select channel 8.



0 8 --:-- ~--:--

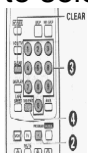
--/--/-- SP

CORRECT

END

**Note:** Remember to press 0 before single-digit channel numbers, times, and dates.


- If you want to record from an external equipment, press the AVX button to select LINE 1 or LINE 2 instead of the channel number.




## DELAYED RECORDING

LINE 1    -:-- ~--:--

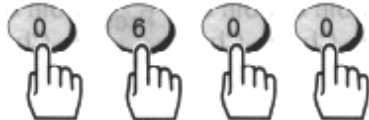
--/--/--    SP

CORRECT 



END 

- If you make a mistake when entering digits, press the CLEAR/EXIT button repeatedly to display "-" for the incorrect digit, then reenter the correct digit.


**6 Enter the start time by pressing (0), (6), (0) and (0) for 6:00.**




0 8    06:00 ~--:--

AM  PM 

--/--/--    SP

CORRECT 


END 


**7 Press the (2) button for PM.**



0 8    06:00PM ~ -:--

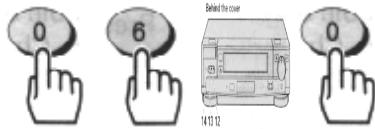
--/--/--    SP

CORRECT 

END 

**8 Enter the end time by pressing (0), (6), (3) and (0) for 6:30.**  
The VCR automatically selects PM for you.

## DELAYED RECORDING



0 8    06:00PM ~ 06:30PM

7 / 08 / 98 WED

SP/EP

CORRECT

END

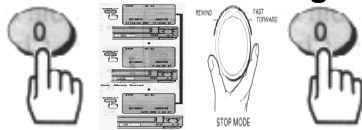
- The screen shows today's date, so no changes are needed on that line.

## DELAYED RECORDING (cont.)

pg. 4

pic

**9 Enter the recording date by pressing (0), (7), (1) and (0) for 7/10/98.**



0 8    06:00PM ~ 06:30PM

07 / 10 / 98 FRI

SP/EP

CORRECT

END




**10 Press the (5) button to select the recording speed EP.**



0 8    06:00PM ~ 06:30PM

## DELAYED RECORDING

07 / 10 / 98 FRI

SP/EP   
CORRECT   
END 

**Note:** Digital recording will automatically be done in the STD mode.

**11 Press the PROGRAM button to set the program in memory.**

pic

**12 Press the POWER button to turn off the VCR.**

The delayed recording indicator will display on the VCR.

This tells you that the VCR will automatically record at the times and dates you have programmed.

- If you are using a cable box, you must **select the channel you want to record on the cable box** (in this case 8); and **turn on the cable box**.

pic    pic

**Note:** You can correct any item entered as you go by pressing the CLEAR/EXIT button repeatedly until the digit to be corrected changes to white dash "-" on the screen. Then enter the correct number. Illogical times and dates won't be accepted.

**To stop recording while in the timed recording mode:**

**1 Press POWER button.**

**2 Press the STOP button within 10 seconds.**

pic    pic

- This can be done either on the VCR or with the remote control.

**When you have set up all the timed recordings you want:**

- Don't forget to load a videocassette (with the safety tab still attached) to record on.
- If using a cable box, turn on the cable box and tune it to the channel you want to record before the time the recording is to begin.
- If you use a DSS® box, press the AVX button to select DSS or LINE 1 in the step **5**, not a channel to be recorded, then turn on the DSS® box before the time the delayed recording is to begin and tune the DSS® box to the channel which you want to record.
- If the VCR and DSS® box are connected via a digital A/V cable, press the AVX or DSS/VCR button in step **5** to display DSS®.

## PROGRAM REVIEW

### PROGRAM REVIEW

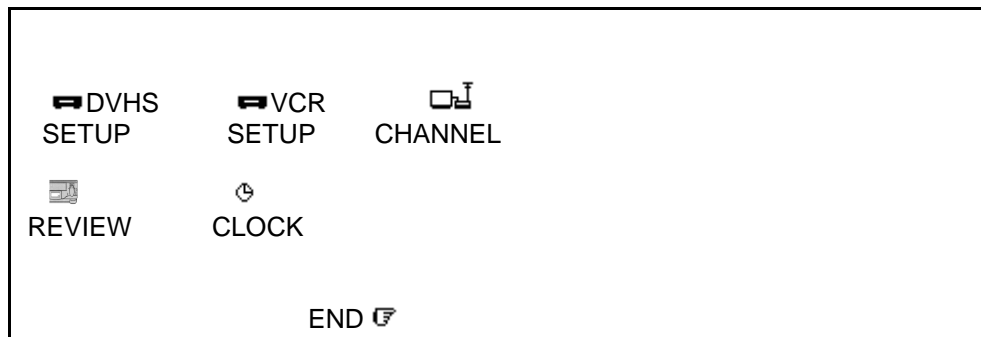
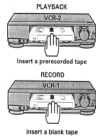
#### Reviewing what you have programmed

You can look back over any of the analog recordings you have preset and if you need to, clear out any of the programs. Normal programs will clear automatically once recording is complete, but daily and weekly setting must be cleared out manually.

pic

#### 1 Press the **GUIDE** button.

The main on-screen menu will appear on the TV screen.



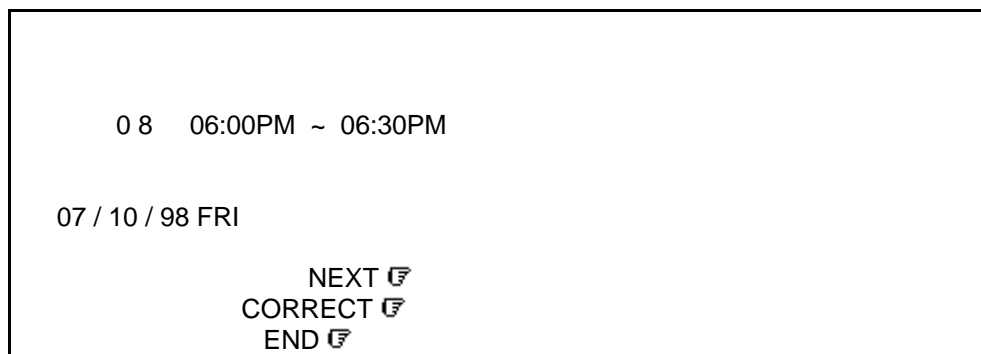
#### 2 Press the **(4)** button for the **PROGRAM REVIEW** option.



This brings up the screen setting for the first program.

**If you want to clear this program, press the **CLEAR/EXIT** button to remove this program.**

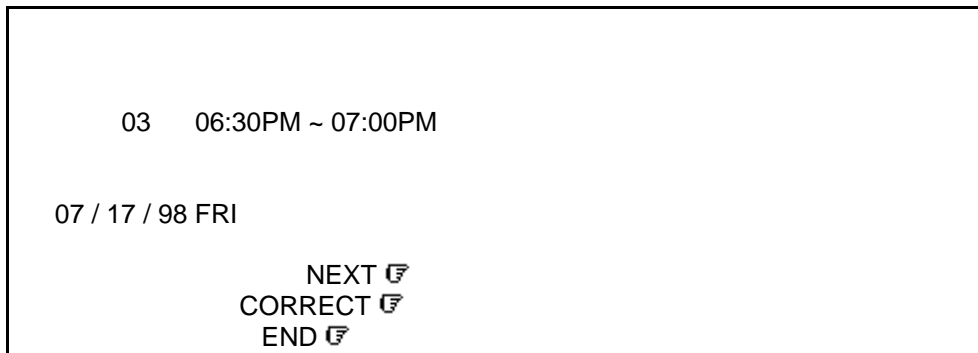
pic



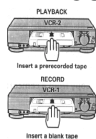
#### 3 Keep pressing the **(4)** button to cycle through all the programs you have preset.

## PROGRAM REVIEW

- The screen will display the next program, if there are more, or it will switch back to the main menu.



### 4 Press the **GUIDE** button to end.

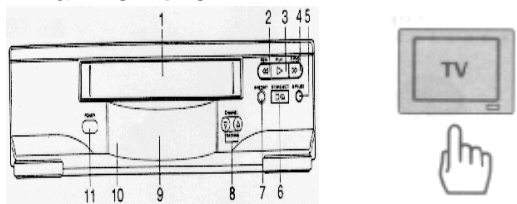


PROGRAMMING THE VCR REMOTE TO CONTROL YOUR TV

PROGRAMMING THE VCR REMOTE TO CONTROL YOUR TV

The VCR remote control can be programmed to control many TV brands that are remote controlled.

1 Turn on the TV.



2 Point VCR remote control toward TV.

pic



pic

3 Press and hold the "TV" button.



4 Press the remote button corresponding to your TV brand as shown in the set-up chart. The TV channel will change to confirm that the remote control has been set.



TV Brand	Press "TV" and this remote button	TV Brand	Press "TV" and this remote button	TV Brand	Press "TV" and this remote button
Hitachi	1	Gold star 1	6	Panasonic 1	CH 
Zenith	2	Toshiba	7	Mitsubishi	CH 
Sony	3	Gold star 2	8	Sharp 1	LAST CH
Magnavox	4	Panasonic 2	9	Sharp 2	DISPLAY
Sanyo	5	RCA	0		

**Note:** If your TV brand is not listed on the Set-Up Chart, try all the buttons listed in the chart until the TV changes channels. If the TV channel does not change, you won't be able to program the remote for your TV.

Using the VCR remote to control your TV

pic

1 Press the "TV" button on remote control.



## PROGRAMMING THE VCR REMOTE TO CONTROL YOUR TV



**2 Point VCR remote control toward TV.**

**3 Press buttons corresponding to the functions available on your TV remote control.**

## USING THE VCR REMOTE TO OPERATE HITACHI OR HUGHES DSS® BOX

### USING THE VCR REMOTE TO OPERATE HITACHI OR HUGHES DSS® BOX

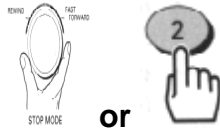
The VCR remote control can be programmed to control Hitachi or Hughes. When using a DSS® box other than these two brands, refer to the DSS® box manual.

pic

**1 Press and hold the "DSS" button.**

pic

**2 Press 1 or 2 button corresponding to your DSS® box receiver ID number as shown in the chart below.**



DSS® box Brand	DSS® box receiver ID number	Press "DSS" and this button
Hitachi	DSS 1	1
DSS 2	2	
Hughes	DSS 1	2
DSS 2	1	

### Remote Control Customer Controls

Remote Control Illustration pic

Item No.	Name of the button	Function
1	—	Transmission window
2	CLEAR/EXIT	to clear the main menu from the display and will return to the channel that was being viewed prior to entering the menus.
3	DISP/INFO	to show the information about the program on the TV screen.
4	DSS GUIDE	to show the available program at a given time on several different channels.
5	PAUSE/SELECT	to show the program guide on the TV screen while watching DSS video.
6	DSS MENU	to show the main menu on the TV screen.
7	—	Cursor keys for DSS® box
8	DSS	to select DSS to control from three devices (VCR, TV, DSS).
9	DSS/TV	to select the DSS mode or the TV mode.

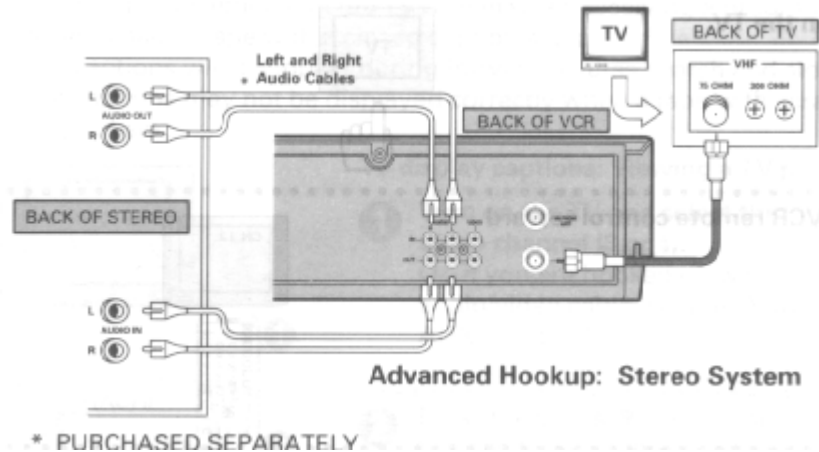
## INTEGRATING YOUR STEREO SYSTEM WITH YOUR VCR

### INTEGRATING YOUR STEREO SYSTEM WITH YOUR VCR

#### Hookup

**When your VCR is connected to a stereo system, you can:**

- Make high quality "audio only" recordings for up to 6 hours (on a T-120 video cassette tape).
- Receive quality stereo sound from your VCR through your stereo system.
- Use the VCR as an extra audio tape deck for dubbing.



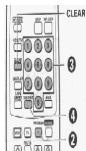
#### To record from stereo

##### **BEFORE YOU BEGIN...**

- Make sure the VCR is connected to your stereo system, as shown above.
- Make sure that **"STEREO"** audio is selected from the VCR Set-Up Menu, as shown on **Page 41**, of **"RECORDING OPERATION"** Section, **"Stereo vs. mono sound"**.
- Select VCR recording speed (**SP** or **EP**) as shown on **page 35**, of **"RECORDING OPERATIONS"** Section, **"VHS Recording Step"**.

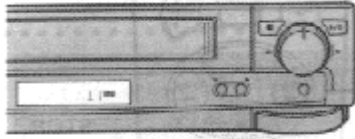
pic

**1 Press the AVX button on remote control, so that L1 (line) appears on the display.**

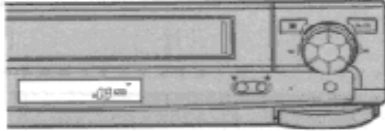


LINE1

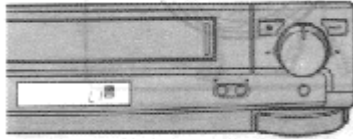
## INTEGRATING YOUR STEREO SYSTEM WITH YOUR VCR



**2 Turn on stereo, and start the selection you wish to record.**

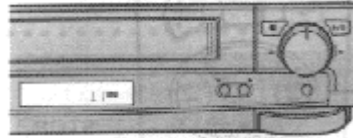


**3 Press the REC/IRT button on VCR or REC button on the remote control to start recording.**



pic

**4 Press the STOP button to stop recording.**



pic

## COPYING TAPES FROM A CAMCORDER

### COPYING TAPES FROM A CAMCORDER

#### Hookup

You may use your VCR to copy tapes from any camcorder onto standard VHS cassette tapes.

pic

**NOTE:** If your camcorder is not stereo (has only one audio plug), connect it to the AUDIO IN-L input on the front of the VCR.

\* It is not necessary to connect the S-VIDEO jack.

#### To copy from a camcorder

##### ***BEFORE YOU BEGIN...***

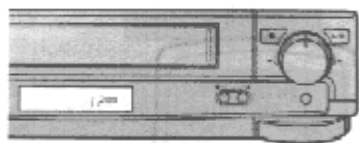
Connect the camcorder's AV output cable to the audio/video jacks on the front of your VCR.

pic

**1 Press the AVX button on remote control, to display L2 (line) on the TV display.**



LINE2



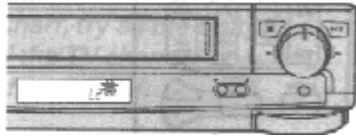
**2 Press the REC, then PAUSE/SELECT buttons on the VCR remote control. The VCR will go into Record/Pause.**

pic

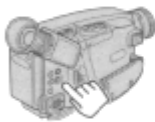
PAUSE

LINE2

## COPYING TAPES FROM A CAMCORDER



**3 Press the PLAY button on the camcorder. You will see the camcorder tape being played on the TV.**



**4 When you see the part of the camcorder tape you wish to copy, press the PAUSE/SELECT button again to release pause and start copying the camcorder tape.**

- Press the stop button to finish recording.
- pic

REC

LINE2

## COPYING FROM ONE VCR TO ANOTHER VCR (DUBBING)

### COPYING FROM ONE VCR TO ANOTHER VCR (DUBBING)

#### Hookup

If you have two VCRs, you may use one VCR to record a tape that is being played back in the other VCR.

#### Notes:

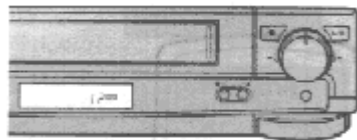
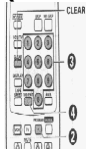
- If you use this VCR for recording, connect cables to the jacks on the front of the VCR.
- D-VHS recorded sections cannot be dubbed. See page 52 for procedure if you want to dub D-VHS recorded sections.

Copying From One VCR to Another Illustration pic

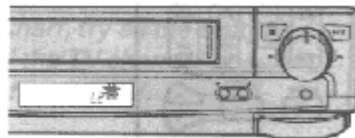
#### To copy from one VCR to another VCR

pic

**1 Press the AVX button on the remote control of VCR-1 so that L2 (line2) appears in the display.**



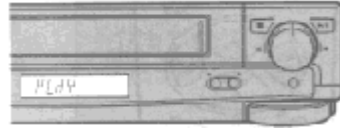
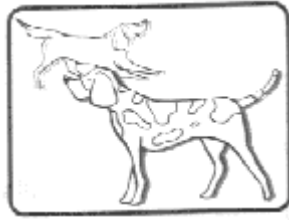
**2 Press the REC, then PAUSE/SELECT buttons on VCR-1. The VCR will go into Record/Pause.**



pic pic

**3 Press the PLAY button on VCR-2. You will see the taped program being played on the TV.**

## COPYING FROM ONE VCR TO ANOTHER VCR (DUBBING)



**4 When you see the part of the program you wish to record, press the PAUSE/SELECT button on VCR-1 again to release pause and start recording.**

- Press the STOP button to finish recording.

pic



## COPYING FROM ONE VT-DX815A TO ANOTHER VT-DX815A (D-VHS DUBBING)

### COPYING FROM ONE VT-DX815A TO ANOTHER VT-DX815A (D-VHS DUBBING)

#### Hookup

If you have two VT-DX815As, you may use one VT-DX815A to record a tape that is being played back in the other VT-DX815A.

#### Notes:

- Analog recorded sections cannot be dubbed. See page 51 if you want to dub analog recorded section.
- You cannot dub a section guarded against copying (where a copy protect signal is inserted) on tape. When the copy guarded section is played back by VCR-2, the D-VHS indicator will flash, and no picture or sound will be recorded by VCR-1.
- The IRT (instant recording timer) cannot be used during dubbing.

Copying From One VT-DX815A to Another VT-DX815A Illustration pic

#### To copy from one VT-DX815A to another VT-DX815A

**1 Holding the DSS/VCR button on the VCR-2 remote control, press the VCR-2 STOP button.**

pic pic

- The VCR-2 D-VHS indicator will light and "dub" will appear in the display.

**Note:** Dubbing cannot be done when "dub" disappears. The dub indicator will disappear if you do not perform dubbing within two minutes after it lights, or if you press the STOP, FF or REW button. When the dub indicator goes out, perform steps 1 and 2 again and make sure that the dub indicator lights, then perform steps 3 and 4.

**2 Holding the DSS/VCR button on the VCR-1 remote control, press the VCR-1 STOP button.**

pic

- The VCR-1 D-VHS indicator will light and "dub" will appear in the display.

**3 Press the PLAY/STILL button on VCR-2.**

- The picture will not appear during dubbing.
- If still playback or visual search is engaged during dubbing, no picture or sound will be recorded.

pic

**4 Press the REC/IRT button on VCR-1 to start recording.**

- Press the STOP button or PAUSE/SELECT to finish recording.

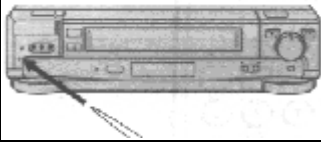
● REC/IRT



## PROBLEM GUIDE

### PROBLEM GUIDE

#### Problem guide

No power	<ul style="list-style-type: none"> <li>• Make sure the VCR is plugged into an AC outlet.</li> </ul>
Remote control doesn't work	<ul style="list-style-type: none"> <li>• Make sure the batteries are fresh, and properly installed.</li> </ul>
Won't record	<ul style="list-style-type: none"> <li>• Safety tab has been removed from cassette (VCR will automatically eject the tape).</li> </ul>
Won't play back	<ul style="list-style-type: none"> <li>• Make sure the TV/VCR switch is set to the VCR mode.</li> <li>• Make sure the TV is set to the VCR channel (3 or 4) or AUX (if using direct audio/video hookup).</li> </ul>
Won't make timer recordings	<ul style="list-style-type: none"> <li>• The VCR power must be turned off to activate timer recording.</li> <li>• Clock is not set correctly.</li> <li>• Programs entered incorrectly.</li> <li>• Programs exceed the length of the cassette. Use the EP recording speed for maximum programming.</li> <li>• Safety tab has been removed from cassette.</li> </ul>
Snowy picture in playback	<ul style="list-style-type: none"> <li>• Snow or picture noise is normal during search, still, and slow Playback.</li> <li>• Head cleaning may be required.</li> <li>• Tape is worn or of inferior quality - adjust tracking controls.</li> </ul>
Snowy picture in normal TV viewing	<ul style="list-style-type: none"> <li>• Check antenna or cable connections.</li> </ul>
Clock shows -- : --	<ul style="list-style-type: none"> <li>• Power has been interrupted - reset the clock.</li> <li>• Reset the clock.</li> </ul>
Erratic VCR display	<ul style="list-style-type: none"> <li>• Push the reset switch (behind the cover on the VCR front) with a sharp pointed instrument (pen, toothpick, etc.).</li> </ul> 
A DSS® broadcast programmed for delayed recording, but not recorded.	<ul style="list-style-type: none"> <li>• Turn off the VCR before the delayed recording starts.</li> <li>• Use the DSS® box to select a DSS® program.</li> </ul>
Cannot D-VHS playback/record.	<ul style="list-style-type: none"> <li>• Make sure the VCR and DSS® box are connected via a digital A/V cable.</li> </ul>
Still picture with block noise appears during D-VHS playback.	<ul style="list-style-type: none"> <li>• Clean the heads.</li> <li>• You have played tapes other than D-VHS and VHS.</li> <li>• Tracking is off. Correct it.</li> </ul>

## MAINTENANCE

### MAINTENANCE

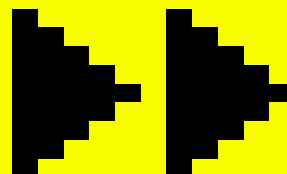
#### Maintenance

Regular periodic maintenance is required to maintain optimum VCR performance. Such maintenance and adjustments should not be attempted by the user. Please consult your service dealer for further information.

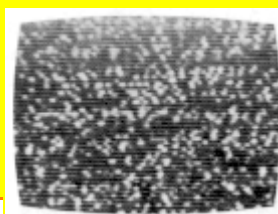
##### Auto Head Cleaning System

This system cleans the video heads automatically when a cassette is inserted and ejected or the VCR is turned on or off while a cassette is in the VCR, to prevent dirt from accumulating on the heads.

**Note:** Mechanical sound is heard during head cleaning.



**NOTE:** Dirt accumulation on the video heads will cause the playback picture to become noisy. **Heavy accumulations due to abnormal usage, or the use of poor quality tapes may be beyond the capabilities of the Auto Head Cleaning System, and may require the video heads to be professionally cleaned by a qualified service dealer.**



It is recommended that you run a cleaning tape periodically to maintain the high quality of D-VHS

## TECHNICAL SPECIFICATIONS

### TECHNICAL SPECIFICATIONS

#### Technical specifications

Format:	D-VHS/VHS
Video Signal System:	D-VHS: D-VHS system standard CTP STD MODE2
Record/Playback System:	VHS: NTSC color EIA standard D-VHS: Digital: 2 Head record/playback system
	VHS: Video: 4 head Audio: VHS Hi-Fi stereo record/playback system
Tape Speed:	D-VHS: 16.67 mm/sec (STD) VHS: 33.35 mm/sec (SP), 16.67 mm/sec (LP) (playback only), 11.12 mm/sec (EP)
RF Input:	UHF/VHF 75 ohm
Tuner:	USA: 181 channel tuning ability* (125 cable channels) Canada: 178 channel tuning ability* (122 cable channels)
Type:	Auto programming frequency synthesis
Power Input:	AC 120V 60 Hz
Power Consumption:	26W nominal
Cabinet Size:	17-1/8" (W) x 3-7/8" (H) x 11-1/8" (D) 43.5 cm (W) x 9.9 cm (H) x 28.2 cm (D)
Weight:	9.2 lbs. (4.2 kg)
Storage Temperature:	-4°F to 131°F
Operating Temperature:	41°F to 104°F
Accessories:	1 coaxial cable (Part No. E5861682) 1 remote control unit (Part No. HL10702), 1 digital A/V cable (Part No. EW11381) 1 D-VHS video tape (Part No. GU10141) 2 AA batteries

\*Check your cable company's compatibility requirements.

For information about how to obtain these and other HITACHI accessories, please call HiTRON, Inc. TOLL FREE at 1-800-995-4500 (in the continental United States). For ALASKA and HAWAII, please contact the nearest Hitachi Regional Office.

Design and specifications subject to change without notice.

#### Hitachi Service Hotline

Authorized Hitachi service facilities are available throughout the US and Canada. For the location nearest to you, call the Hitachi Service Hotline at one of these numbers:

## TECHNICAL SPECIFICATIONS

### In the continental U.S.A

#### **DIAL TOLL FREE**

7 days a week, 24 hours a day

**1-800-HITACHI**

(1-800-448-2244)

You must state your zip code when calling

### In Canada

MONTREAL	514-956-9882
TORONTO	905-821-4545
VANCOUVER	604-214-0777